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***Space, Missile, Command, and Control***

## ***DEPLOYMENT OF AIRFIELD OPERATIONS***

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***This ANG supplements AFM 13-220, 1 May 97 and is applicable to the ANG. The ANG supplemented text is included into this basic instruction in bold italics.***

This manual implements AFPD 13-2, *Air Traffic Control, Airfield Management, and Range Management*. It defines operations, command relationships, training standards, and capabilities of airfield operations and Deployable Air Traffic Control and Landing Systems (DATCALs) in a single-integrated concept. It is designed to provide guidance on Air Force airfield operations unique planning aspects not addressed in Joint Operations Planning and Execution System (JOPES) documents and to complement Air Force planning at all levels. This manual is not intended to replace or supersede AFIs 13-203 or 13-213. If there is a conflict between this manual and other AFIs, notify HQ AFFSA/XA of the conflict. Air traffic controllers, communications-electronics maintainers, airfield management, and planners should be familiar with this manual to ensure they understand proper deployment for combat operations. Users of this manual should familiarize themselves with the referenced Department of Defense (DoD) guidance. ***Report conflicting ATC directives to ANG/C4A. Provide specific references and information on how the conflict impacts your unit.***

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## Chapter 1

### GENERAL

**1.1. Purpose.** This manual outlines how facility operators for both Air Traffic Control (ATC) and airfield managers will deploy, operate, and sustain Deployable Air Traffic Control and Landing Systems (DATCALS) to support operations from bare base to host nation locations. While the focus of the concept is on deploying large scale forces into a bare base scenario, airfield operations can also be adaptable to small unit and/or single mission deployments. The goal of this document is to define and standardize how operators deploy and support initial and sustained airfield operations.

This document outlines the roles and responsibilities of operational planners, ATC, and airfield managers to support DATCALS and users. Finally, this manual will lay out how we support Theater Battlefield Management (TBM) through combat airspace and the integration of the airfield operations into war fighting plans.

#### **1.1. (ANG) ANG Policy and Readiness Goals:**

**1.1.1. (Added) (ANG) Air National Guard (ANG) Air Traffic Control Squadrons (ATCSs) will be staffed IAW their Unit Manpower Document (UMD) and Support Personnel Manpower Document (SPMD). Each ATCS shall be equipped and trained IAW individual unit type codes (UTC) configuration in order to meet any potential UTC/team tasking.**

**1.1.2. (Added) (ANG) Specific mobility/deployment procedures for ATCSs are contained in their host base mobility plans IAW Air Force Instruction (AFI) 10-403. Unit readiness, mobility preparation and employment concepts, and procedures are contained in this ANG Supplement. Annexes for specific war and contingency plans/Operational Plans (OPlans) will be published by host Wing/ATCS where necessary.**

**1.1.3. (Added) (ANG) Procedures established in this manual and the host base mobility plan will be exercised to ensure that unit can support tasked war and contingency/OPlans as required.**

**1.1.4. (Added) (ANG) Assigned UTCs will be maintained at the highest possible readiness posture. Each UTC must be mobile/transportable within time frames specified in the unit Designed Operational Capability (DOC) statement.**

**1.1.5. (Added) (ANG) Training is a major function in ATCS. Unit commanders may use UTCs for training. When units desire to deploy their unit type codes (UTC) to support local, state, or federal peacetime missions, the following process shall be followed.**

**1.1.5.1. (Added) (ANG) To ensure coverage under the Westfall ACT, the deploying unit shall coordinate a written approval request with ANG/C4A at least 60 days prior to the deployment. The request will be reviewed and if validated as a good training opportunity, approval will be granted.**

**1.1.5.2. (Added) (ANG) The following items will be part of the request to deploy: UTC/equipment involved, number of personnel (AFSC specific), location, inclusive dates, and (though it is a unit responsibility to fund for Annual Field Training (AFT) and other local training exercises) forward any shortfall requests for days and/or dollars.**

***1.1.5.3. (Added) (ANG) For deployments that include the controlling of live ATC operations, units will coordinate with ANG/C4A for approval of local operating procedures (LOPS) as defined in AFI 13-203 and the ANG supplement.***

***1.1.5.4. (Added) (ANG) When requested to deploy by other MAJCOMs, local wings, and/or other agencies who desire temporary use of DATCALs equipment, compliance with AFI 10-414, Request for Employing Combat Communications Resources in Peacetime, is mandatory.***

***1.1.5.5. (Added) (ANG) UTCs used for training or other purposes which are not deployable in specific DOC tasked time frames, will be reported IAW AFI 10-201.***

**1.2. Mission.** The airfield operations mission is to deploy worldwide in support of operational forces at host nation or bare base locations and provide basic airfield services and combat airspace support to the theater Air Operations Center (AOC). DATCALs provide the capability to identify, sequence, and separate aircraft; provide final approach guidance and control instructions to aircraft at deployed locations in all types of weather. DATCALs equipment and personnel can be employed to provide liaison, control tower, Radar Approach Control (RAPCON), precision landing capabilities, and mobile Tactical Air Navigation Aid (TACAN) services or any combination.

***1.2.1. (Added ANG) All ANG ATCSs shall be highly familiar with the contents of AFFTP (I) 3-2.23 (FM-100-104), Multi-service Procedures for Joint Air Traffic Control (JATC).***

***1.2.2. (Added ANG) All ACC-gained ANG ATCSs shall use ACCI 33-158, Communications-Information Planning for Exercises, ACCPAM 33-159, Deployable Communications Standards--Deployed Management Procedures Checklist, and ACCI 33-165, Deployable Communications Standards Grounding and Safety Techniques for the planning and execution of deployments to the maximum extent possible. 297 ATCS shall use all PACAFI 33-150 Volumes for the planning and execution of deployments to the maximum extent possible.***

### **1.3. Assumptions.**

1.3.1. Airfield operations for the purpose of this manual is defined as the communications-electronics (equipment and maintainers) and operations (air traffic controllers and airfield managers). Airfield operations consist of the following core capabilities: DATCALs equipment and personnel (air traffic control, airfield management, and communications-electronics maintenance).

1.3.2. Augmentation to host nation will augment (not replace) the existing ATC and airfield management systems.

1.3.3. Continuing support to the National Airspace System (NAS) as an in-place mission and support for deployed forces comprise the airfield operations' core support areas. Airfield Operations Flights (AOF) provide assets to support the wartime/contingency taskings first and in-place taskings second.

1.3.4. Airfield operations is not a part of the core Unit Type Code (UTC) package. Airfield operations is a support UTC organized, trained, and equipped in a functional area to support dedicated locations versus type and number of aircraft at beddown locations.

*1.3.5. (Added) (ANG) ANG ATC UTCs for the purpose of this manual are defined as the communications-electronics equipment, maintainers, air traffic controllers and any or all of the above components addressed in the associated DOC statement.*

## Chapter 2

### COMMAND AND CONTROL RELATIONSHIPS/STRUCTURE

**2.1. Air Staff Responsibilities.** HQ Air Force XO and SC Program guidance Letter establishes the direction, assigns responsibility, and provides guidance for the management of DATCALs.

2.1.1. AF/XOO through the HQ Air Force Flight Standards Agency (AFFSA) will:

2.1.1.1. Act as the single ATCALs (fixed and deployable) Program Objective Memorandum (POM) advocate.

2.1.1.2. Serve as ATC and airfield management functional managers.

2.1.1.2.1. Maintain a current list of UTCs tasked in exercises or real-world contingencies and coordinate with Air Force Operations Center (AFOC) and MAJCOMs on special missions.

2.1.1.2.2. Follow guidance in AFMAN 10-401.

2.1.1.2.3. Maintain personnel deployment data.

2.1.1.3. Develop the policy and guidance for DATCALs and airfield operations readiness.

2.1.1.3.1. Publish airfield operations guidance in War Mobilization Plan (WMP) Vol 1, Annex II.

2.1.1.3.2. Maintain/validate WMP Vol 3, Part 2, UTC availability for 7FVL\*. (\* denotes all in the series)

2.1.1.4. Conduct the DATCALs working group.

2.1.1.5. Maintain the airfield operations and DATCALs training standards.

2.1.1.5.1. Maintain combat skills and wartime readiness training standards.

2.1.1.5.2. Develop cradle to grave training plan concept.

2.1.1.6. Function as the lead office for combat airspace policy and guidance.

2.1.2. HQ USAF/XOOR will function as the ATC Program Element Monitor (PEM) for Program Element Code (PEC) 35114.

2.1.3. AF/SC staff will:

2.1.3.1. Serve as supporting functional manager for airfield operations.

2.1.3.2. Maintain/validate WMP Vol 3, Part 2, UTC availability for 6K\*\*\*.

(\* denotes all in the series)

2.1.3.3. Function as the Combat Communications PEM for PEC 27422.

2.1.4. ANG/XOB will:

2.1.4.1. Serve as functional manager for ANG assets.

2.1.4.2. Function as ANG ATC PEM for PEC 53110.

**2.1.5 (Added) (ANG) ANG/C4A will:**

**2.1.5.1. (Added) (ANG) Review and evaluate ATCS inputs to host base mobility plans.**

**2.1.5.2. (Added) (ANG) Conduct staff assistance visits to ATCSs as requested.**

**2.1.5.3. (Added) (ANG) Maintain accurate status of the readiness of ATCSs.**

**2.15.4. (Added) (ANG) Serve as focal point for all ANG DATCALs taskings. Provide centralized and coordinated tasking of personnel and equipment for ANG DATCALs resources. Screen tentative tasking for ATCS resources to ensure that they support the training and readiness posture of tasked units/personnel.**

**2.1.5.5. (Added) (ANG) Conduct periodic evaluation of ATCS mobility functions.**

## **2.2. Supported Air Components Airfield Operations Responsibilities.**

2.2.1. Supported air components airfield operations planners usually include the Numbered Air Forces (NAF) combat airspace managers, PACAF and USAFE airfield operations staffs, and theater Special Operations Forces (SOF) for unconventional activities.

2.2.2. Develop airfield operations portion of OPlans including the initial and sustaining phase requirements at each location in the AOR.

2.2.3. Modify existing OPlans or identify requirements needed to support contingency operations.

2.2.4. Coordinate initial theater airfield operations support requirements in OPlans with HQ AMC/DOA to ensure airlift requirements are included.

2.2.5. Determine method of rotation for personnel (Palace Blitz/Tenure or UTC). Ensure appropriate line remarks such as Special Experience Identifiers (SEIs) are included in the Deployed Manning Document (DMD) so the right types of personnel deploy to support the operations.

2.2.6. Ensure DATCALs and personnel participate in sufficient number of exercises possible to practice war fighting skills.

2.2.7. Follow guidance in AFMAN 10-401.

2.2.8. Code all airfield operations positions (NAF/MAJCOM) that require functional expertise, experience, and training in contingency or war planning functions (i.e., UTCs, TPFDDs, mobility plans, etc.) with the "R" prefix (minimum one per airfield operations/combat airspace staff). "R" prefix is designated for planners at all levels IAW AFMANs 36-2105 and 36-2108.

## **2.3. Supporting Commands Airfield Operations Responsibilities.**

2.3.1. All MAJCOMs including ANG with any airfield operations deployment function will establish Designed Operational Capability (DOC) statements and ensure units organize, equip, and train, personnel to standards in the DOC statements.

2.3.1.1. Ensure personnel have the appropriate combat skills as defined in the training section of this manual. (Currently, each UTC-tasked MAJCOM is responsible to fund course attendance; however, AFFSA will advocate funding at the Air Force level.)

2.3.2. Ensure MAJCOM TERPS support (i.e., instrument procedures reviews, waiver processing, etc.) is provided to supported command.

2.3.3. MAJCOM functional managers periodically check (minimum once a year) plan Time-Phased Force Deployment Data (TPFDD) sourcing.

2.3.4. Follow guidance in AFMAN 10-401.

2.3.5. Code all Unit Manning Document (UMD) positions that require functional expertise, experience, and training in contingency or war planning functions (i.e., UTCs, TPFDDs, mobility plans, etc.) with the "R" prefix (minimum one per MAJCOM airfield operations staff). "R" prefix is designated for planners at all levels IAW AFMANs 36-2105 and 36-2108.

2.3.6. MAJCOMs will have the responsibility to provide training and standards for command unique equipment requirements.

**2.3.6. (ANG) *This shall be accomplished by use of the ANG Command JQS 003, Combat Readiness and ANG Command JQS 004, Site Survey.***

2.3.7. HQ ACC Specific Tasks.

2.3.7.1. Establish and maintain joint SC, DO, and ANG cooperative DATCALs management effort to achieve logistics support and training.

2.3.7.2. Serve as the gaining MAJCOM for all CONUS-based ANG units performing ATC missions.

2.3.7.3. Function as the Manpower and Equipment Force Packaging System (MEFPAK) responsible command for airfield operations UTCs.

2.3.7.4. Serve as lead command for developing and standardizing DATCALs UTC operators combat skills training, to include ANG.

## 2.4. Wing Responsibilities.

2.4.1. Ensure personnel are mobility qualified and depart home station appropriately equipped to meet mission requirements as outlined in the tasking message (see **Attachment 2** for recommended list of equipment).

2.4.2. Minimum standard for each active duty UTC position tasked is to have one primary and one alternate trained and qualified. For example: If Blank AFB is assigned one tower UTC, with a total of four personnel, then eight personnel need to be trained. ANG units are authorized manning at a 1 to 1.2 ratio, IAW the AF C4I Panel.

## 2.5. Deployed Structure.

2.5.1. The command and control relationships and structure for deployed operations will be consistent with AF, Numbered Air Force (NAF) Concept of Operations (CONOPS) for Theater Battle Management (TBM). The force components will be subordinate to the Joint Task Force (JTF) IAW Joint Pub 3-52. The AFFOR/A3 and A6 supports the AFFOR/CC and will maintain control over AF theater level combat airspace, air traffic control and airfield managers, and DATCALs maintainers. NAF UTCs may support the designated service component commander or multinational operations as assigned. The wing commander at deployed locations supports the AFFOR/A3 for operational and AFFOR/A6 for DATCALs equipment issues.



2.5.2. Deployed Wing Structure. The command and control structure will be consistent with Air Force and wing plans. Airfield operations personnel deploy with the parent wing to the extent possible depending on airfield operations facilities at the deployed location. When equipment is deployed, it operates under the control of the deployed wing commander. The Operations Support Squadron (OSS) Commander or senior airfield operations representative is the wing's focal point for all DATCALS and airfield operations.

2.5.2.1. Airfield Operations. The deploying airfield operations locations will each have a single Airfield Operations Flight Commander (AOF/CC) under the OSS. When equipment is deployed, the initial AOF/CC is usually an officer from the Combat Communications Groups (CCG) airfield systems flight. (Note: After the initial deployment, typically 120 to 179 days, the CCG is usually not required to augment the mobile equipment for successive rotations; however, the supporting MAJCOMs make the sourcing decision for rotations. Recommend augmentation of air traffic controllers come from fixed facilities.) The AOF/CC acts as the site location representative for all airfield operations issues. The AOF/CC provides oversight responsibilities for DATCALS equipment, maintenance, and airfield operations personnel. The AOF/CC will coordinate DATCALS placement and service for host country, international flights, and theater operations. The OSS/CC and AOF/CC determine the local airfield operations organization (i.e., chief controller(s), chief of training, chief airfield manager, etc.).

2.5.2.2. In-garrison CCG Deployed ATC Duty Responsibilities. In-garrison assigned air traffic control managers primarily ensure currency of equipment training for deploying augmentees, timely deployment of equipment and supplies, and facilitate installation of equipment and initiation of air traffic services at deployed locations. Secondary role includes controlling air traffic and/or supervising facilities during initial deployment rotation. Note: Additionally, CCG TERPS specialists are responsible for siting equipment and developing instrument procedures for the NAVAIDS.

**2.5.3. (Added) (ANG) ANG ATCSs may deploy in a variety of UTC configurations based on tasked missions. At larger, total force deployments sites, ANG personnel and equipment will be integrated into deployed force structure as outlined above.**

**2.6. (Added) (ANG) ATCS Responsibilities.**

**2.6.1. (Added) (ANG) Maintain a readiness posture, which will support taskers in war, contingency and exercise plans/OPlans.**

**2.6.2. (Added) (ANG) Be pro-active in providing personnel and equipment for operational commitment requirements.**

**2.6.3. (Added) (ANG) Develop and conduct local training programs, which will enable personnel to successfully support war and contingency taskings.**

**2.6.4. (Added) (ANG) Conduct exercises of UTC packages. Units will inject as much realism as possible into such exercises, to include the concepts of "time-phased force deployment" and the "the five phases of mobility", pre-deployment, deployment, employment, re-deployment and recovery.**

**2.6.5. (Added) (ANG) Ensure that unit requirements are included in the host base mobility plan.**

### Chapter 3

#### AIRFIELD OPERATIONS UNIT TYPE CODES (UTCS)

##### 3.1. Air Traffic Control.

3.1.1. 7FVL9-ATC Tower Augmentation (1-1C171 and 3-1C151s): Provides ATC tower personnel to augment mobile or fixed control tower facilities. Controllers must possess either 056/055 control tower SEIs. Note: The 1C171 must possess 055 SEI. Facility rated 1C131s with 6 months experience after certification may substitute for 1C151s.

3.1.2. 7FVLC-ATC Radar Operations Augmentation (1-1C171 and 2-1C151s): Provides radar qualified air traffic controllers to augment mobile or fixed radar approach controls. All controllers must possess 364/362 RAPCON SEI. Note: The 1C171s must possess 362 and 365 SEIs. Facility rated 1C131s with 6 months experience after certification may substitute for 1C151s.

3.1.3. 7FVLF-AOF/CC and Chief Controller (1-13MX and 1-1C191): Provides augmentation support for ATC operations/airfield operations/liaison functions at control centers, host nation/allied ATC centers, embassies, and headquarters staff.

3.1.4. 7FVLG-ATC/Combat Airspace Management Augmentation (1-13MX and 2-1C171s): Provides military air traffic expertise to support/coordinate airspace control functions; including implementation of air control measures, integration of air traffic facilities within theater and support air navigation aid system operations. Supports airspace control element within theater air operations center and liaisons with regional operations control centers, and host nation facilities. Joint Air Operations Staff Course, participation in one Air Operations Center (AOC) exercise (900 or CK SEI) required.

3.1.5. 7FVLP-Air Traffic Control Precision Radar Operations (3-1C151s): Provides precision radar qualified air traffic controllers to augment mobile/fixed Precision Approach Radar (PAR) facilities.

**3.2. Airfield Management:** 7FVLB-Airfield Management Augmentation (1-1C071 and 2-1C051s): Provides bare base or host nation airdrome augmentation to support flight operations. Acts as the focal point for all matters concerning airdrome ground operations to include, tactical parking, coordinate on all hot/unsafe gun area and hot refueling areas, arm-dearm areas, taxi-launch procedures, etc.

##### 3.3. Special Operations UTCs with Airfield Operations Capabilities.

3.3.1. 8CCSQ-Special Tactics Team (STT) Combat Control C2 Element: Deployable to bare base with base operating support provided. Provides command and control, operations management, administrative support for sustained operations of employed STT UTCs. Supports up to three 8CCBD. Capable of 24 hour operations for up to 45 days without resupply. UTC 8CCLG must be deployed with this UTC if maintenance and logistics support is required. AFSC 3A0X1/3S0X1, 13DX/C13DX are interchangeable. For ANG forces, AFSCs 2E153 and 2S071 are interchangeable

3.3.2. 8CCBD-STT Combat Control Operations: Deployable to bare bases with base operating support provided. Provides positive control of the terminal objective area aviation environment. Provides VFR/limited IFR ATC services. Provides strategic reconnaissance/surveillance, offensive fire targeting/spotting, forward arming and resupply point (FARP) control, sitting/operations of NAVAIDS/Beacons, and assault zone selection, assessment, survey and establishment. Demolition capable. Can support 24-hour operations for up to 3 landing zones for up to 14 days, or be divided into smaller elements as mission requirements dictate. Capable of being employed by parachute, overland, airland, scuba, watercraft, or alternate insertion/extraction. For operations exceeding 14 days, must be augmented by 8CCLG plus appropriate equipment only resupply UTCs. Special mission equipment UTCs will be deployed as mission requirements dictate.

3.3.3. 9AATA-Special Operations Liaison Element (2-13MX/1C191): Provides Air Force Special Operations Forces (AFSOF) augmentation to theater Special Operations Command (SOC) and to provide SOC liaison to AOC staff. (Note: AFSOC also has other command unique UTCs to support AFSOC missions that have controllers embedded.)

### **3.4. Miscellaneous UTCs with Embedded Airfield Operations Capabilities.**

3.4.1. 6KMF9-Communications Electronic Sq Management Element with AOF/CC (1-13MX and 2-1C171s): Provides AOF/CC and Terminal Instrument Procedures Specialist (TERPS) (SEI 361) from Combat Communications Squadrons to manage/site and develop instrument procedures to support DATCALS equipment.

3.4.2. 7E1AE-TALCE (1-1C051): Has minimal airfield management expertise to operate at deployed locations.

3.4.3. 7E1AP-Airfield Survey Team (2-1C071s): Designed to conduct worldwide airfield site surveys to assess airfield capabilities in support of airlift and tanker operations.

3.4.4. 7FVX1 (5-13MX, 2-1C191, and 1-1C171)-Air Operations Center (AOC) Quick Reaction Package (QRP): AOC QRP provides limited staff and equipment to command, control, plan, and coordinate limited air operations (300 sortie Air Tasking Order (ATO) capability).

3.4.5. 7FVX2 (3-13MX and 4-1C171)-AOC Limited Response Package: Provides staff and equipment to command, control, plan, and coordinate limited contingency operations (1,000 sortie ATO)—deploys with 7FVX1.

3.4.6. 7FVX3 (2-13MX and 1-1C171)-AOC Theater Response Package: Provides staff and equipment to command, control, plan, and coordinate theater air operations (2,000 sortie ATO)—deploys with 7FVX1 and 7FVX2.

3.4.7. 9AAJB (1-13MX and 2-1C171): Air Mobility Element (AME) Combat Airspace Management Support. Provides staff to coordinate AME airspace requirements with AOC combat airspace planners.

## Chapter 4

### DEPLOYABLE ATCALs EQUIPMENT

#### 4.1. Basing.

4.1.1. Active duty DATCALs are based in:

4.1.1.1. The 1 st Combat Communications Squadrons (CBCS) at Ramstein AB, Germany

4.1.1.2. The 3 CCG at Tinker AFB, OK

4.1.1.3. The 5 CCG at Robins AFB, GA

4.1.1.4. AFSOC maintains DATCALs at various locations

4.1.2. ANG DATCALs are based in Air Traffic Control Squadrons (ATCS's) at:

4.1.2.1. 235 ATCS at Selfridge ANGB, MI

**4.1.2.1 (Added) (ANG) 235 ATCS at New London, NC**

4.1.2.2. 241 ATCS at St Joseph, MO

4.1.2.3. 243 ATCS at Cheyenne, WY

4.1.2.4. 245 ATCS at McEntire ANGB, SC

4.1.2.5. 248 ATCS at Meridian, MS

4.1.2.6. 258 ATCS at Johnstown, PA

4.1.2.7. 259 ATCS at Alexandria, LA

4.1.2.8. 260 ATCS at Pease International Tradeport, NH

4.1.2.9. 270 ATCS at Klamath Falls, OR

4.1.2.10. 297 ATCS at Kapolei, HI

**4.2. Threat.** DATCALs are subject to the same level of threat as the wing or group assets they support. The deployed elements can expect to operate in an environment that includes electronic warfare threats to transmissions, collateral damage threats to terminals and/or shelters, and automated systems. Appropriate electronic countermeasures, transmission operations, and information security procedures must be followed. References that detail these threats are Electronic Combat Threat Description (DST-2660F-731, DIA 23 Dec 92), Threat Environment Description for Command, Control, Communications, Computers, and Intelligence (C4I) systems and networks, and Threat Support Document, Worldwide Threat to Air Bases 1991-2001 (FTC-2660F-265-92, NAIC, 31 Dec 91).

**4.3. Equipment Integration with Other Systems.** DATCALs do not have a dedicated communications net; therefore, it should be capable of integration with existing communications (both US and allied) to form a system that ensures safe, efficient flow of air traffic supporting the combat effort and maximizing combat flexibility.

4.3.1. Communications/information support to DATCALs will be consistent with the USAF C4I Horizon document which outlines the planning perspective for information systems and the application of information technology across the spectrum of Air Force operations. Common user networks are preferred for communications linking DATCALs to the operating environment. DATCALs operate nearly autonomously from other theater systems. These circuits should be provided as part of the base communications infrastructure. No unique communications of information systems support is required.

4.3.2. DATCALs must have reliable, jam-resistant radios, radars, secure radios, mode 1-4 and mode S transponder capabilities to include capabilities to interface with both the Theater Air Control System (TACS) and ground-based air defenders. Currently, interface capabilities are accomplished through voice coordination.

#### **4.4. Landing Control Central-6KBV1-AN/TPN-19 (Active Duty).**

4.4.1. The AN/TPN-19 Landing Control Central (Radar Set) can be configured as a complete RAPCON or Ground Controlled Approach (GCA) facility. The radar unit is used by air traffic controllers to identify, sequence, and separate participating aircraft; provide final approach guidance, guidance through air defense corridors and zones, and coordinate ID and intent with local air defense units at assigned airports/air bases/bare bases. These services can be provided in all types of weather. Normally requires 4-7FVLC and 2-7FVLP UTCs as augmentation; however, the situation will drive actual requirements.

4.4.1.1. The radar unit is capable of identifying aircraft using secondary radar within a 200 nautical miles (NM) radius and primary radar coverage to 60 NM. The PAR provides both azimuth and elevation information from 15 NM to touchdown. Both the PAR and ASR can be used as final approach aids.

4.4.1.2. The unit has six display indicators capable of providing both Airport Surveillance Radar (ASR) and PAR. With all indicators and communications equipment operational, the unit is capable of taking over ATC operations at busy airports. Depending on antenna location, the PAR system is capable of providing service for up to four runways, but the unit can provide approach guidance to only one runway at a time.

4.4.2. Setup Time: Ten maintenance personnel are needed to install the AN/TPN-19 within 26 hours, not including site survey. After setup, six radar maintenance personnel can maintain the TPN-19, with the other four available for redeployment. The power production and air conditioning maintenance personnel may be "pooled" with other personnel to meet deployed location requirements. Requires flight inspection to become operational. Note: Under combat limited situations with no augmentees assigned, the standard setup time is 36 hours.

#### **4.5. Landing Control Central-6KBK1-AN/MPN-14K (RAPCON) (ANG).**

4.5.1. The AN/MPN-14K Landing Control Central (Radar Set) can be configured as a complete RAPCON or GCA facility. The radar unit is used by air traffic controllers to identify, sequence, and separate participating aircraft; provide final approach guidance, guidance through air defense corridors and zones, and coordinate ID and intent with local air defense units at assigned airports/air bases/bare bases. These services can be provided in all types of weather.

4.5.1.1. The radar unit is capable of identifying aircraft using secondary radar up to a 200 NM radius and primary radar coverage to 60 NM. The PAR provides both azimuth and elevation information from 15 NM to touchdown. Both the PAR and ASR can be used as final approach aids.

4.5.1.2. The unit has three ASR display indicators and one PAR indicator located in the operations shelter, and one each ASR and PAR indicator located in the maintenance shelter. Complete operations are conducted from the operations trailer. The system is limited to a single runway but has the capability of providing opposite direction runway operations with the aid of a transportable turntable.

4.5.2. Setup Time: Ten maintenance personnel and six controllers are needed to install the AN/MPN-14K within 26 hours. Requires flight inspection to become operational.

#### **4.6. ATC Tower Central-6KBG1 (ANG) or 6KBG2 (Active Duty)-AN/TSW-7.**

4.6.1. The AN/TSW-7 is a mobile control tower used to provide ATC capabilities where no control tower exists (bare base operations) or where the fixed control tower is not operational. The AN/TSW-7 has limited capabilities; however, it provides controllers with the minimum items necessary to rapidly launch and recover (to include silent launches) participating aircraft in the most expeditious manner. Normally requires 2-7FVL9 UTCs to augment the 6KBG2 UTC; however, the situation will drive actual requirements.

4.6.1.1. The AN/TSW-7 provides air traffic controllers, landlines, UHF/VHF radios, crash phone, emergency warning and evacuation alarm signal, barometer, tape recorders, binoculars, NAVAID monitor, light guns, and wind measuring equipment (no BRITE/D-BRITE capability).

***4.6.1.1. (ANG) The AN/MSN-7 (6KBS1) is a mobile control tower used to provide ATC capabilities where no control tower exists (bare base operations) or where the fixed control tower is not operational. The AN/MSN-7 has limited capabilities; however, it provides controllers with the minimum items necessary to rapidly launch and recover (to include silent launches) participating aircraft in the most expeditious manner.***

4.6.1.2. There are three controller positions: local control (controls airborne aircraft and runway traffic), ground control (controls all other aircraft ground movements and vehicles), and flight data (handles administrative coordination). With all three positions staffed, the TSW-7 doesn't have any additional space for other personnel such as Supervisor of Flying or dedicated watch supervisor.

***4.6.1.3. (Added) (ANG) The AN/MSN-7 provides air traffic controllers, landlines, UHF/VHF radios, crash phone, emergency warning and evacuation alarm signal, barometer, tape recorders, binoculars, NAVAID monitor, light guns, and wind measuring equipment (no BRITE/D-BRITE capability).***

***4.6.1.4. (Added) (ANG) There are three controller positions: local control (controls airborne aircraft and runway traffic), ground control (controls all other aircraft ground movements and vehicles), and flight data (handles administrative coordination). With all three positions staffed, the MSN-7 doesn't have any additional space for other personnel such as Supervisor of Flying or dedicated watch supervisor.***

4.6.2. Setup Time: Seven maintenance personnel should have the mobile tower operational with 3 UHF radios plus a 243.0 MHz guard receiver, 2 VHF radios plus 121.5 MHz guard receiver, and 1 light gun operational within 16 hours. After the unit is fully operational, two ground radio technicians can maintain it, with air conditioning, power, and telephone support being supplied by the deployed organic wing.

***4.6.2. (ANG) Seven maintenance personnel should have the mobile tower operational with 3 UHF radios plus a 243.0 MHz guard receiver, 2 VHF radios plus 121.5 MHz guard receiver, and 1 light gun operational within 6 hours. After the unit is fully operational, two ground radio technicians can maintain it, with air conditioning, power, and telephone support being supplied by the deployed organic wing.***

#### **4.7. Tactical Air Navigation (TACAN)-6KBA1-AN/TRN-26.**

4.7.1. The AN/TRN-26 is designed for use at remote landing strips and forward operating areas. The system provides radio navigation information (bearing, identification, and distance). Due to the UHF carrier, the transmitted information is limited to line of sight (LOS).

4.7.1.1. The system has usable range of 35 NM at 1,500 feet above unobstructed terrain and a reception range of 100 NM. Actual system coverage and reception depends upon deployment location. Associated monitoring equipment provides a continuous check of all significant parameters and shuts the TACAN off when a fault occurs.

4.7.1.2. Frequency range: Low band channels 1-63, TX 962-1024 MHz; RX 1025-1087 MHz; High band Channels 64-126, TX 1151-1213 MHz; RX 1088-1150 MHz.

4.7.2. Setup Time: All assigned maintenance personnel should have the TACAN operational within 4 hours. At least one integral monitor and either primary or backup, with at least 360W output power<sup>12</sup> and identification must be operational before the TACAN can be declared operational. Requires flight inspection to become certified for IFR use.

#### **4.8. TACAN-AN/TRN-41.**

4.8.1. The AN/TRN-41 is a portable, lightweight, air droppable, unmanned TACAN designed to provide bearing, facility identification, and distance information. The TACAN transmits continuous bearing information to an unlimited number of aircraft and provides slant range distance information. Due to the UHF carrier, the transmitted information is limited to LOS use only with a range of 75 NM. Actual system coverage and reception depends upon deployed location. Note: This TACAN does not possess external monitoring device as required by AFMAN 11-225; therefore, it is not certifiable for IFR use.

4.8.2. Setup Time: Three trained personnel should have the system operational in 4 hours. The TACAN must be transmitting identification and at least 100W of power prior to declaring the system operational.

#### **4.9. Mobile HF/UHF/VHF Radio System-6KGQ1-MRC-144.**

4.9.1. The AN/MRC-144 is a mobile HF/VHF/UHF communications facility (AN/GRC-206) mounted in a M-998 Highly Mobile Multi-Wheeled Vehicle (HMMWV). It provides Single Sideband (SSB) HF, VHF/FM, VHF/AM, and UHF communications. This system can be remotored up to two kilometers. The HF radio has non-secure phone patch capability and all radios have secure voice capability. When used in an ATC capacity, ATC personnel must be tasked separately. Provides VFR control tower operations until sustaining equipment arrives then it can be redeployed as necessary.

4.9.2. Air Traffic Control Personnel Required:(1)7FVL9 UTC (MODIFIED)This UTC must be tailored to meet this limited air traffic control capability. Required personnel include two 1C171 with SEI 055 (vice the usual one) and two 1C151 with SEI 056 (vice the usual three).

4.9.3. Setup Time: One radio technician and 1 radio operator should have HF/SSB, VHF/FM, UHF/AM, and VHF/AM radios available over 90 percent of the tuning range in 45 minutes. If the MRC-144 is being used primarily as a backup control tower or command post, the radio operator may not be required and may be available for redeployment. The ground radio technician may not be required if other UTCs requiring radio maintenance are deployed with the wing.

#### **4.10. VHF/UHF-AM Radio Set-AN/TRC-176.**

4.10.1. The AN/TRC-176 is a portable UHF/VHF radio set operating in the 1160 to 149.975 or 225.0 to 399.975 MHz frequency bands. It can provide one channel of either UHF or VHF voice communications (both UHF and VHF cannot be operated simultaneously) and can be secured with TSEC/KY-57 and operate in the HAVE QUICK mode to prevent enemy jamming. This system, although not a part of DATCALs, acts as an important back-up ATC communications capability in the event of degraded operations from the ATC deployable systems.

4.10.2. Air-to-ground radio operations encompass the majority of missions for this system, although it can be used for local command and control and engineering nets. The operational range for local area ground-to-ground communications is less than 35 miles with minimal obstructions between communications points. For air-to-ground the operational range is up to 200 miles line-of-sight.

4.10.3. Setup Time: One ground radio technician should have 8W of power over 90 percent of the VHF and UHF tuning ranges within 4 hours. After the unit is operational, the technician can be returned to home base if there are other radio technicians available to maintain the radio.

#### **4.11. Mobile Microwave Landing System (MMLS)-AN/TRN-45.**

4.11.1. Purpose: The AN/TRN-45 (MMLS) is a lightweight, transportable ground-based precision guidance approach system for MLS avionics equipped aircraft. Normal setup is a collocated configuration where elevation and azimuth antennas are situated together at the typical ILS glideslope antenna location. The collocated configuration requires using aircraft to be equipped with specialized MLS receivers (e.g., CMLSA, PLSR). A split-site configuration places the azimuth antenna at the departure end of the runway.



4.11.1.1. The system has an azimuth coverage of +/- 40 degrees, elevation coverage of 0.9 degrees to 15 degrees, and a 15 NM range under optimal conditions.

4.11.1.2. Frequency range: MMLS 5031-5091 MHz, DME/P 979-1150 MHz.

4.11.2. Setup Time: Three trained personnel can set up the MMLS in a co-located configuration in 60 minutes. Set up in a split-site configuration will take 2 hours (times do not include site survey or transportation time). Requires TERPS specialists to draw instrument approach procedures and flight inspection to be certified for IFR use.

#### **4.12. Air Traffic Control Flight-6KTA1 (Active Duty)/6KTA2 (ANG).**

4.12.1. Provides all weather air traffic control operations from a bare base. Includes AOF/CC, TERPS staff, admin support, ATC tower (6KBG2 or 6KBG1), ATC radar (6KBV1 or 6KBK1), and TACAN (6KBA1). The Active Duty UTC requires augmentation by two 7FVL9 for tower, four 7FVLC and two 7FVLP for the radar.

4.12.2. Setup Time: Refer to setup times for individual equipment listed above (i.e., TPN-19, TSW-7, etc.).

## Chapter 5

### OPERATIONS

#### 5.1. General.

5.1.1. Concept of Airspace Control. Generally, in a combat theater/AOR, air traffic and airspace command and control systems are integrated under a single combined/joint forces airspace control authority. USAF ATC facilities and personnel (fixed, tactical, and augmentation) become an integral part of the Theater Air Control System (TACS). USAF controllers perform terminal air traffic operations, combat airspace control within the TACS, or liaison/augmentation at host nation control facilities. All USAF ATC planning, training, and operating procedures must reflect this concept and any additional mission/roles defined by combat.

5.1.2. Mission Priorities. Stated in the Defense Planning Guidance. Usually include:

5.1.2.1. Support for 2 Major Regional Conflicts (MRC).

5.1.2.2. Operations Other Than War (OOTW) such as humanitarian relief and disaster response.

5.1.2.3. Exercises, operational readiness inspections, and test or demonstrations.

**5.1.2.4. (Added) (ANG) State and local missions in support of disaster relief or as required.**

5.1.3. Flight Inspection Center (FIC). The DoD flight inspection capability for contingency or combat operations is assigned to HQ AFFSA/FIC. The 1991 USAF/Federal Aviation Administration (FAA) Memorandum of Agreement (MOA) transferred six BAE 125-800A (C-29) aircraft to FAA. The FAA uses the assigned USAF personnel and aircraft to flight inspect navigational aids outside the scope of FAA planned activities (i.e., combat or contingency operations).

5.1.3.1. Capabilities and Responsibilities.

5.1.3.1.1. FIC flight inspects TACANs, VORTACs, VORs, NDBs, MLS, ILS, ATC radars, approach airfield lighting, and other navigational aids. Flight inspection ensures navigational aids meet signal quality and accuracy parameters, and that instrument approach procedures and obstacle clearance criteria are met.

5.1.3.1.2. FAA supplies civilian maintenance personnel and Mobility Readiness Spares Package (MRSP) equipment for operations. Therefore, aircraft maintenance support should be located outside hostile areas.

5.1.3.1.3. The optimum beddown base for the C-29s should be within 300 miles of airfields to be flight inspected.

5.1.3.1.4. Terminal Instrument Procedures Specialist (TERPS) must supply approach procedures packages and specific airfield site survey data to flight inspection aircrews, and the FIC liaison assigned to the AOC, before flight inspection can begin. Flight inspection aircrews and TERPS should normally meet face-to-face to coordinate ATC and operational requirements before airborne inspections commence.

**5.1.3.1.4. (ANG) ATCS unit site surveys/verifications will be conducted IAW Chapter 12 and Attachment 4 of this manual. Units shall possess the capability to develop instrument procedures at deployment location. Airfield survey data may also be gathered and sent to the ANG/C4AT for stateside deployments or to the appropriate gaining command for overseas deployments time permitting. Either method must result in the supplying of approach procedure packages and specific airfield site survey data to flight inspection aircrews prior to flight check.**

5.1.3.2. FIC UTCs.

5.1.3.2.1. 3MAF1-Contingency Flight Inspection Support: Provides one C-29 flight inspection aircraft and crew to evaluate and certify ATCALS for limited contingency/wartime requirements. Plan for two, 3.0 hour sorties per day; three sorties per day may be possible depending on available support and local conditions. Majority of operations limited to day, visual meteorological conditions (VMC) due to regulatory and safety factors. Deployable to a main base or limited base with 5,000 feet hard surface runway. Longer runway length required in hot weather or icy conditions. Requires infrastructure support from host wing/group when operating within AOR (i.e., intel, life support, weather, equipment issue, individual weapons storage, etc.).

5.1.3.2.2. 3MAF2-Theater Flight Inspection Support: Provides two C-29 flight inspection aircraft and crews to evaluate and certify ATCALS for contingency/wartime requirements at multiple airfields in a theater of operations. Plan for two, 3.0 hour sorties per day, per aircraft; three sorties per day may be possible depending on available support and local conditions. Majority of operations limited to day, VMC due to regulatory and safety factors. Deployable to a main base or limited base with 5,000 feet hard surface runway. Longer runway length required in hot weather or icy conditions. Requires infrastructure support from host wing/group when operating within AOR (i.e., intel, weather, life support, equipment issue, individual weapons storage, etc.). The FAA will establish a maintenance base with deployed MRSP and aircraft maintenance personnel (civilian) in or near the AOR. Includes one pilot in the AOC used for ATO coordination.

5.1.3.3. Requesting flight inspection support: The operational command should task one of the UTCs in the TPFDD and send a message requesting support. Note: Planners should ensure flight inspection capabilities are planned early on so diplomatic clearance delays are kept to a minimum.

**5.1.3.3. (ANG) The TERPS Specialist responsible for procedures development at a specific site shall ensure that this requirement is met.**

5.1.3.3.1. Message address contingency/combat support: FAA Aerocenter Oklahoma City OK//FICO/ IFIO/AVN-1AF//. Info copies to HQ FAA Washington DC//ADA-20//; HQ AFFSA Andrews AFB MD//CC//; and HQ USAF Washington DC//XOO/XOOO//.

5.1.3.3.2. Message address routine support (e.g., exercises, readiness inspections):  
FAA Aerocenter Oklahoma City OK//FICO//. Info copy to FAA Aerocenter  
Oklahoma City OK//AVN-1AF/IFIO//.

## 5.2. Deployed Responsibilities.

5.2.1. Air Operations Center (AOC) and Theater Planners. The directed lead element with theater combat airspace management personnel to support the AOC provides the flexibility needed within the airspace control system to meet contingency situations that necessitate rapid employment of forces. Combat airspace management in the AOC provides joint airspace management which is the critical element to the promotion of effective, safe, yet flexible use of airspace; and allows the commanders to operate with minimum constraints. They develop the Airspace Control Order (ACO) and Airspace Control Plan (ACP) and also act as the initial airfield operations planners for contingencies and wartime operations.

5.2.1.1. Assigns operational control areas in coordination with the Joint Task Force (JTF)/Combined Tasked Force (CTF) and host nation.

5.2.1.2. Tailors DATCALS and airfield operations packages to meet specific mission needs (every attempt should be made to keep the package as small as possible).

5.2.1.3. Coordinates airfield operations support for initial AMC airlift with HQ AMC/DOA.

5.2.1.4. Works with the AFFOR and Special Operations Command (SOC) staffs to coordinate the movement/replacement of the Special Tactics Teams (STT) with airfield operations personnel

5.2.1.5. Assigns ATC automation via data link with the TACS through the tactical operations data (TACOPDAT) and operations tasking (OPSTASK) link.

5.2.1.6. Develops airspace control procedures that are simple and flexible with minimal reliance on voice communications.

5.2.1.6.1. Develops, monitors, and de-conflicts airspace control measures/procedures in the AOR.

5.2.1.6.2. Ensures ATC plans are compatible with system capabilities.

5.2.1.6.3. Develops flow control procedures that readily allow EMCON operations.

5.2.1.6.4. Coordinates terminal control procedures with each base/airfield operations and/or host nation base operations authority. Include surge launch and recovery procedures.

5.2.1.6.5. Coordinates airspace control procedures with air base ground defense and air defense procedures.

5.2.1.6.6. Ensures airspace control procedures comply with published rules of engagement.

5.2.1.7. Schedules and coordinate all flight inspection requirements with the FAA Flight Inspection Central Operations (FICO) or theater AFFSA/FIC liaison assigned to the AOC. All newly installed mobile or fixed-site navigational facilities, and some existing foreign facilities, should be considered unreliable until flight inspected.

5.2.1.8. Ensures instrument procedures, not published in a DoD or National Oceanic Atmospheric Administration Flight Instrument Procedures (FLIP) document, have been reviewed by the applicable MAJCOM TERPS and that aircrews are informed when these

procedures do not meet recognized obstruction clearance or flight inspection criteria (reference AFI 11-206, AFMAN 11-230).

5.2.1.9. The AFFOR staff will develop a personnel rotation plan as coordinated with the AOC (airfield operations planners).

5.2.1.10. Develops guidance for employment addressing waivers to separation standards, ATO versus flight plan filing, and ATC radar performance of air defense surveillance functions.

5.2.1.11. Transition of some duties from initial AOC quick reaction package to AFFOR staff is situational.

5.2.2. AOF/CC will coordinate:

5.2.2.1. Terminal area procedures with all users at that deployed location.

5.2.2.2. Area airspace and terminal area operations procedures with the AOC airspace control center and/or host nation liaison team for inclusion into the ACP, ACO, and/or host nation publications as appropriate. Advise the AOC of any change in airfield status immediately.

5.2.2.3. Terminal area operation procedures with the base defense operations center for integration into the base air defense and air base ground defense plans and operations.

5.2.2.4. Integration into the TACS IAW AOC guidance contained in the TACOPDAT and OPTASK Link messages via the ACP.17

5.2.3. The host service/wing is responsible for providing Base Operating Support (BOS) to include sleeping and mess facilities, fuel, power production, vehicle support, secure communications, and security. OSS personnel are responsible for coordinating with deployed logistics agencies to arrange for adequate BOS.

### 5.3. Limiting Factors.

5.3.1. DATCALs. Airlift into the theater is extremely limited during the deployment and employment phases. DATCALs will be prioritized by the deployment operations planners along with the other assets and missions going to the designated location and will be included in the TPFDD. The DATCALs planners must get the equipment and personnel to the bases in sufficient time to provide operational support.

#### Flight inspection.

5.3.1.1. Aircraft movement in Instrument Meteorological Conditions (IMC) and at night, especially by the Civil Air Reserve Fleet (CRAF), may be dependent upon airfield navigation/landing aids and approaches being formally certified by FIC flight inspection.

5.3.1.2. Formal flight inspection of newly installed navigational aids requires day, VMC as a minimum. Weather requirements in mountainous terrain may be greater than minimum VMC.

5.3.1.3. Flight inspection aircraft have no on-board defensive systems. Flight inspection operations in a hostile area may be delayed until threats are suppressed or escort assets are allocated to the flight inspection mission.

**5.4. Initial Deployment.** Minimal airfield operations services are provided until sustaining DATCALs arrive. Small, lightweight, minimum capability, and highly mobile packages will provide initial Visual Flight Rules (VFR) or limited (procedural control rather than positive control) Instrument Flight Rules (IFR) ATC. Fighting forces and supporting units deploying in initial phases of a crisis should be self-sufficient (i.e., food, water, shelter, etc.) for up to 14 days.

5.4.1. ATC Elements:

5.4.1.1. Special Tactics Teams (STTs): Air Force STTs are designated as combat forces and assigned to Air Force Special Operations Command (AFSOC). The STTs are tasked through Special Operations Command (SOCOM) and execute SOF missions, strategic and theater airlift missions, and other missions with SOF and non-SOF forces. STTs provide austere airfield operations capabilities to the commander. STTs also provide limited weather observations and C3 in the objective area. STTs are capable of conducting operations for the initial 14 days of operations. After this time STTs will require resupply and/or augmentation UTCs to continue operations. STTs usually begin the ATC battlefield support process in austere environments. These assets may or may not remain at the location after initial deployment airflow is complete. They support all Special Operation Force unique missions and locations not originally tasked to receive general ATC support. Capabilities can include: limited visual control tower, TACAN, and a precision landing system (i.e., MMLS).

5.4.1.2. ATC.

5.4.1.2.1. Bare Base. Initial air traffic services may consist of a MRC-144 package (HMMWV with radios) from either fixed base Wing Initial Communication/Mobility Initial. Communication packages or CCGs and ANG squadrons. Capabilities can include: limited visual control tower, TACAN, and a precision landing system (i.e., MMLS). ATC usually replaces STT controllers at beddown locations where they were used to provide initial wing

support.

5.4.1.2.2. Host Nation Facilities. ATC can serve as augmentation to host nation ATC facilities as directed by supported command.

5.4.2. Initial Airfield Management.

5.4.2.1. Bare Base. The Tanker Airlift Control Element (TALCE) usually provides initial airfield management/base operations/command and control support; however, the airfield management UTC may be required to augment or provide initial support.

5.4.2.2. Host Nation Facilities. Airfield management augmentation personnel can provide support for flying operations at host nation airfield.

**5.5. Sustaining Deployment.** DATCALs will provide sustaining airfield operations to supplement the initial deployment phase and provide required positive control IFR capability up to dual runway precision approach. This will provide full base airfield operations support for an extended period of time. A full range of terminal (mobile control tower, ASR, precision landing capabilities, and/or navigational aids both space- and ground-based) and transmission medium equipment is included in this phase. Airfield management augmentation personnel from CONUS bases are required for this phase.

**5.6. Redeployment.** DATCALs are theater assets and not considered organic to the wing. When the wing rotates out of theater, DATCALs equipment may remain in place. By leaving the DATCALs equipment, it reduces airlift and possibly flight inspection requirements. It may become necessary to rotate personnel as the theater matures and airlift becomes available.

**5.7. Personnel Rotation.** The supported AF Component Command (AFCC) will determine if rotations are sourced using either PALACE MANNING or UTC programs.

5.7.1. PALACE MANNING programs (Blitz, Tenure, etc.) are the primary method to rotate personnel. The program is run by AFPC/DPWRM in conjunction with HQ AFFSA/OL-M (AFPC/DPAAD4) and the personnel community IAW AFI 10-215.

5.7.1.1. AFFSA/OL-M is the primary source to determine fairshare taskings.

5.7.1.1.1. Required to inform the MAJCOM airfield operations functional managers and AFFSA/XAW when PALACE taskings are being referred to commands.

5.7.1.1.2. Required to maintain a master listing of all current airfield operations taskings.

5.7.1.2. MAJCOM airfield operations functional managers should work closely with their personnel community to assist/recommend units/volunteers for the tasking.

5.7.1.3. Personnel rotations for ANG volunteers will be managed by ANG/XOD.

5.7.2. UTC rotation is the secondary method to support deployed airfield operations.

5.7.2.1. The supported AFCC will send a message to sourcing agencies identifying UTCs to be sourced or replaced and the authority for deployment of forces (i.e., appropriate CJSC order).

5.7.2.1.1. If the sourcing agency is unable to fill the tasking, send message to the AFCC and informational copy to "AFOC Washington DC" and AFFSA/XA Andrews AFB MD with justification.

5.7.2.1.2. When notified of the shortfall, the AFCC will notify parent command and AFOC via ops immediate message including "UTC shortfall" in subject line.

5.7.2.1.3. The AFOC through the air staff functional area managers (AFFSA/XAW) will task the shortfall to an appropriate sourcing agency.

5.7.2.2. Supporting commands have the option to frag and insert (identify personnel from more than one base to fill a UTC) as needed to fill required UTCs since ATC is an integral part of the NAS and must provide required services to civil aviation at home bases.

5.7.3. The first rotation should be staggered so all personnel do not rotate at the same time due to training/spin-up time of new personnel. Every attempt should be made to ensure some personnel overlap to ensure a smooth transition.

## **5.8. Security.**

5.8.1. COMSEC must be safe guarded against any physical loss during all phases of their existence.

5.8.1.1. Authentication tables may be required and planners should coordinate to ensure the appropriate amount is available for all locations in the AOR.



5.8.1.2. STU-IIIs are valuable tools in combat operations. Planners at all levels should coordinate to ensure STU-IIIs will be available at the deployed location. Units may need to take their own equipment to ensure this capability.

5.8.2. Physical Security. Air base ground defense is an important facet in combat operations. Coordination with the deployed security forces unit will determine the amount of personnel required to protect the airfield operations assets.

*5.8.2. (ANG) Under exercise/contingency operations, mobile facilities consider the following suitable procedures: posting guards for a controlled entry point, use of access rosters, establish procedures and use additional checks for requesting access to facilities (tower cab, or radar vans) once inside the perimeter of an ATCALS area.*

*5.8.3. (Added) (ANG) General. The protection of critical DATCALS resources is an important factor in the success of any tactical operation. The Resource Augmentation Duty (READY) Program identifies, places, codes, and trains personnel to meet augmentee needs for installation-level exercises, contingencies, wartime, or emergency situations/scenarios. Once deployed, ATCS personnel may be required to participate as a security augmentee under READY program. The extent of security requirements will depend on tasked mission, employment location and availability of security forces support and the hostile threat. ATCS personnel need to be trained and equipped to satisfy owner-user security requirements within their AOR. In addition, they should be trained and familiar with basic ground combat skills IAW AFDD 2-4.1, Force Protection, as well as Basic through level III threats IAW AFI 31-301, Air Base Defense and Air Force doctrine.*

*5.8.4. (Added) (ANG) Tactical Security Planning and Responsibility. The Physical protection of ATCS resources remains the responsibility of all unit personnel throughout mobility operations. Units must ensure that they are capable of increasing security of in-garrison assets during periods of increased threat levels and ensure the protection of assets through the deployment phase.*

*5.8.4.1. (Added) (ANG) Deployment commanders should make every effort to ensure that the information required in the deployment survey Attachment 4, part 1, subparagraph 11 is available prior to deployment or immediately upon arrival at the employment location. This is necessary to ensure that host base/defense forces are informed of the location and criticality of ATCS resources and unit personnel are aware of their specific security/defense responsibilities.*

*5.8.4.2. (Added) (ANG) For peacetime deployments to non-hostile areas, deploy only enough weapons to arm personnel as determined and directed by the ATCS commander. Weapons will be tasked by higher headquarters, when required, for deployments to hostile areas.*

*5.8.5. (Added) (ANG) Off Base Sites/Stand-Alone Deployments. ATCSs in support of contingency operations may be required to deploy to remote or off base sites and will most likely have to provide/or assist in providing their own security and defense. The extent of security requirements will depend on the size of the element deployed, the employment location and the threat.*

**5.8.5.1. (Added) (ANG) *In the event the employment location is not defended by friendly forces, the site/team chief must take all possible actions to ensure the short-term defense of the site.***

**5.8.5.1.1. (Added) (ANG) *The area should be cleared and secured prior to setting-up equipment.***

**5.8.5.1.2. (Added) (ANG) *Establish defensive positions around the perimeter of the site. The number and location of defensive positions will depend on the size of the site, terrain and natural cover/concealment available.***

**5.8.5.1.3. (Added) (ANG) *Evacuation routes and procedures should be developed and briefed to all personnel.***

**5.8.5.1.4. (Added) (ANG) *Conduct routine communications/security checks with host base and armed response forces.***

*5.8.5.2. (Added) (ANG) In addition, the site/team chief must ensure that the unit is continuously updated on the hostile threat in the area. During periods of low threat, on-duty personnel will be alert for unauthorized and unfamiliar personnel or activity in the area. However, as the threat increases, the site chief must order the manning of defensive positions with armed personnel. Additionally, as a minimum, one individual at each UTC facility will be armed.*

*5.8.6. (Added) (ANG) Weapons and Ammunition Security. All weapons will be under continuous and positive control. Positive control begins on removal of weapons from a secure storage facility and must be maintained until they are returned:*

*5.8.6.1. (Added) (ANG) When weapons are to be withdrawn from their permanent storage facility, the individual identified by the ATCS commander to assume responsibility for them (armorer) will accomplish the following:*

*5.8.6.1.1. (Added) (ANG) Sign for all weapons and ammunition on AF Form 1297, Temporary Issue Receipt.*

*5.8.6.1.2. (Added) (ANG) Maintain a listing of all weapons by make, model and serial number.*

*5.8.6.1.3. (Added) (ANG) Control and account for all keys (including the vehicle ignition keys) to the vehicle mobile armory in which the weapons and ammunition are to be transported and stored.*

*5.8.6.1.4. (Added) (ANG) During field deployments, ensure that an inventory of all weapons, ammunition and keys is conducted at each shift change. Weapons will be inventoried and inspected for serviceability and cleanliness before they are returned to the permanent storage facility.*

*5.8.6.1.5. (Added) (ANG) During field deployments ensure that enough solvent, rods, patches, cloths, etc., for cleaning deployed weapons are at each location.*

*5.8.6.2. (Added) (ANG) When weapons are transported off-base in a mobile armory, they will be guarded by two personnel, each armed with an M-16 rifle and 120 rounds of 5.56mm ball ammunition.*

*5.8.6.3. (Added) (ANG) Protecting Firearms Under Field Conditions. If an established armory (security police, RED HORSE, sister service, etc.) is available, attempt to obtain approval to store weapons in the armory. If an established armory is not available or you are unable to obtain approval for weapons storage, weapons will be under armed guard at all times. The guard will be armed with an M-16 rifle and 120 rounds of ammunition:*

*5.8.6.3.1. (Added) (ANG) Weapons should be stored in a lockable weapons storage container. Weapons racks used at home base may be deployed for on-site storage if they provide a locked storage capability.*

**5.8.6.3.2. (Added) (ANG) *An armed response force must provide rapid response within a reasonable time (normally 15 minutes). Armed response may be provided by security police, sister service or host nation military, local civil police agencies or a two person owner-user response force armed with M-16s and 120 rounds of ammunition per weapon. If response is provided by owner-user personnel, the armed guard is not considered a member of the armed response force. Procedures must be established to ensure that the agency or individuals providing armed response are notified immediately of the theft or attempted theft of weapons.***

**NOTE: *During exercise deployments, individuals tasked to provide security of deployed weapons will not participate in exercises and will wear an orange or red vest to easily distinguish them from exercise participants. Magazines containing live ammo magazines will be painted red or orange to preclude them from being intermixed with any magazines containing blank ammo.***

## **5.9. Planning Factors.**

5.9.1. Combat attrition factor will be a minimum of three bare bases or as specified in the current Defense Planning Guidance.

5.9.2. Language speaking requirements will be requested through the PALACE BLITZ program and not identified as a UTC requirement.

5.9.3. A site survey/ADVON team of personnel should deploy a few days ahead of the equipment in order to determine siting location and special requirements for connectivity. These personnel would be part of the initial UTC so they would not be considered an extra requirement.

**5.9.3.1. (Added) (ANG) *When a tactical mission is imminent, the tasked unit should ensure that a site survey is readied for deployment IAW Chapter 12 of this manual.***

**5.9.3.2. (Added) (ANG) *Equipment siting is a joint ATCALS maintenance/ATC operations responsibility.***

5.9.4. ANG will use volunteerism to the maximum extent possible. When volunteerism is no longer viable two options exist:

5.9.4.1. Active duty assumes responsibility for manning the location.

5.9.4.2. ANG unit is activated using Presidential Selective Reserve Call-up (PSRC) IAW AFI 10-402 and AFH 10-416. During initial planning, ensure this option is available.

5.9.5. Long Term Support. At the 120 day demarcation, regardless of tasked unit(s), HQ ACC/SCX/DOF, with coordination from HQ USAF/SCM/XOO, should initiate requests with the supported. CINC, JTF, or agency to consider the installation or lease of semi-permanent C4 systems and DATCALS to replace deployable wartime assets.

5.9.6. Airfield operations planners should ensure required clearances into host nation ATC facilities are requested and check the Status of Forces Agreement for ATC liabilities prior to US forces actively controlling traffic (if invited into country).

5.9.7. To determine airfield operations tasking, deployment locations should have the following capabilities:

5.9.7.1. Radar approach control to provide surveillance radar to the location(s).

5.9.7.2. Control tower.

5.9.7.3. Terminal TACAN/VORTAC to provide a non-precision approach capability.

5.9.7.4. Precision approach capability.

**5.10. (Added) (ANG) Unit Readiness Concepts: ATCSs must maintain a day-to-day readiness posture that will ensure assembly and deployment of personnel within the time constraints specified in the units' DOC statements. Units will prepare inputs to their host base mobility plans, as needed, to make sure that this plan supports their unit mobility processing requirements. Prior to contingency/war conditions, units can normally expect to be placed in an increased state of readiness and be provided tentative specific taskings. Unit readiness includes actions required to ensure a capability of deploying UTCs in support of an assigned missions. ATCSs readiness posture must be able to provide a rapid response to all tasking. Units will develop and periodically exercise unit recall procedures. All personnel are subject to deployment and shall be thoroughly familiar with recall and mobility procedures. If a unit has been specifically tasked to support a plan, the unit training programs must be constructed to simulate the tasking. To avoid divulging a specific tasking during training, OPSEC must be practiced. UTC team chiefs/work center supervisors ensure unit readiness by accomplishing the following:**

**5.10.1. (Added) (ANG) Administrative Support Kits: All UTC admin support kits should be maintained at a fill rate of at least 95% of the items listed on the packing list inventory attached to each kit.**

**5.10.2. (Added) (ANG) Individual duty sections shall prepare an operating instruction to use when briefing newly assigned personnel. This instruction serves as a ready reference on local procedures and must be reviewed by all section personnel at least annually. Each duty section shall ensure that this annual review is appropriately documented.**

**5.10.3. (Added) (ANG) Individual duty sections shall develop local checklists for all phases of pre-deployment, site survey, deployment, employment, and recovery.**

## Chapter 6

### TRAINING

**6.1. General.** Personnel and equipment training will be integrated into unit training plans. Air Force deployment training requirements for all airfield operations military personnel subject to deployment or identified to deploy are defined in AFI 10-403, AFI 13-203, AFI 13-213, AFJQS-003, ATC combat readiness and CFETP-1C0X1, airfield management. This manual's objective is to ensure an institutionalized and standardized Air Force training program which spans across all MAJCOMs for the airfield operations. The concept is to use a 3-phase approach: (1) Pre-deployment training required to be assigned to UTC, (2) Combat skills course, and (3) Exercises-to practice and apply what has been learned.

**6.1. (ANG) ATCSs shall use the ANG Command JQS 003, Combat Readiness and ANG Command JQS 004, Site Survey in lieu of AFJQS-003 ATC Combat Readiness as this product is not available.**

**6.2. Pre-deployment Training.** Mobility tasked personnel, active duty and ANG, must be trained prior to deployment if they are to be effective.

**6.2. (ANG) All ATCS personnel who hold an AFSC identified to deploy must complete all required qualification/proficiency training as outlined in Attachment 3, Duty Position Training Tasks Required for UTC Personnel.**

6.2.1. Formal technical schools, follow-on classes, and qualification training packages are available through Air Education and Training Command (AETC). All formal school curriculum (apprentice courses, 1C1X1/13M3 Controller Development Course, and Craftsman courses; and 1C0X1 Airfield Mgt) and Air Force Job Qualification Standards (AFJQS)-001, ATC Operator and AFJQS-002, ATC Management must be completed prior to being assigned to a mobility position.

**6.2.1. (ANG) For 299 RCS, Volk and Alpena CRTC's, completion of the following meets the minimum requirement to deploy: Weapons training, Law of Armed Conflict, Self-Aid and Buddy Care Training, and Force Protection Familiarization Training. Additional training may be necessary prior to actual deployment based on the requirements of the specific AOR.**

6.2.2. The wing is responsible for training personnel on standard mobility requirements such as government motor vehicle training, chemical warfare training, weapons training, proper mobilization procedures to include personnel processing, airlift load preparation, and palletizing.

**6.2.2.1. (Added)(ANG) All personnel are required to qualify through live fire training when receiving initial weapons training on any weapon IAW AFI 36-2226, Combat Arms Program. ATCS may, if due to munitions shortage, use firearms simulators for two consecutive qualification periods. Then the shooter must receive live-fire training.**

**6.2.2.2. (Added)(ANG) It is the responsibility of the ATCS/CC to ensure deploying personnel meet any applicable AOR CINC special qualification requirements for the critical threat area they are tasked to support. This may include actual live fire qualification prior to deployment if an individual's last qualification was on a firearms simulator.**

6.2.3. UTC assigned personnel must complete unit level exportable training materials (as available) prior to being deployed.

**6.2.3. (ANG) Train controllers on those task items which require qualification and base minimum performance standards on the individual's mobility or wartime task, consistent with local training capabilities. At locations where PAR is available, all controllers who have a mobility or wartime radar task will complete and maintain an RFC rating.**

**6.3. Combat Skills Training.** All airfield operations UTC-tasked personnel (primary and alternate) shall receive combat skills training IAW AFJQS-003, ATC Combat Readiness or CFETP-1C0X1, Airfield Management.

6.3.1. Combat Skill School (CSS). CSS should teach survival skills and equipment familiarization under field conditions.

6.3.2. ACC/ANG will provide adequate training slots at Tinker, Robins, and Alexandria for both active duty and ANG operators/airfield management to maintain combat skills.

6.3.3. The CSS is recurring training required every 3 years for UTC assigned personnel.

**6.3.4. (Added) (ANG) Unit personnel will be trained on all unit assigned general purpose vehicles including prime movers.**

#### **6.4. Exercises.**

6.4.1. The MAJCOMs/NAFs will ensure integration of the DATCALS into training exercises. These exercises should use realistic planning, deployment, and maintenance training for DATCALS UTCs field exercises whereby deployable equipment usage and skills are taught is important in the training process to practice how we will fight. UTCs tasked to support DATCALS and combat airspace/liaison positions must be indoctrinated through exercises prior to "real world" deployments if they will be responsible for establishing/managing these systems while deployed.

**6.4.1. (Added) (ANG) ANG/C4A will ensure ATCSs are integrated into Joint Patriot type exercises as well as joint readiness training exercises.**

#### **6.5. Airfield Operations Planners Requirements.**

6.5.1. To obtain the "R" prefix requires the following:

6.5.1.1. Six months experience in a planning job and

6.5.1.2. Mandatory attendance at one of the following courses:

6.5.1.2.1. MCADRE002-Contingency Wartime Planning Course

6.5.1.2.2. MCADRE003-Joint Doctrine Air Campaign Course

6.5.2. Attend the Joint Air Operations Staff Course (JAOSC).

**6.6. (Added) (ANG) TACTICAL TERPS TRAINING (TTT). The capability for Tactical TERPS is critical to mission success of any equipment UTC deployment. It is therefore critical that ATCS ensure that they have a highly trained and motivated team of TERPS specialists to meet mission and deployed TERPS requirement. TERPS specialists may deploy as part of the radar UTC or may depart prior to actual UTC deployment as a stand-alone cell or as part of**

*an airfield site survey team. In any of these cases the TERPS specialist must be properly trained and equipped to meet the deployed challenge.*

*6.6.1. (Added) (ANG) Initial TERPS Training will be conducted using AFJQS 1C1X1-002, TERPS Section, IAW AFI 11-230 and AFMAN (I) 11-226.*

*6.6.2 ANG/C4AT shall provide a TTT Certification Course. This course is designed to provide a basis overview of tactical TERPS operations and procedures. MAJCOM delegation for final review and approval authority to ATCS/TERPS Unit Type Code (UTC) deployment package when required to support unique geographical requirements for short-notice operations IAW AFI 11-203.*

*6.6.2.1. (Added) (ANG) To maintain certifications as outlined in paragraph 6.6.2. above a complete automated and manual TACAN, PAR, and ASR procedure shall be developed annually. A Minimum Vectoring Altitude (MVA) and Minimum IFR Altitude Chart will also be developed as part of the refresher training. Document completion of this annual training requirement on the unit's pre-printed AF Form 1098. Forward completed TERPS packages to ANG/C4A NLT 15 Apr of each year.*

*6.6.2.2. (Added) (ANG) If annual TERPS refresher training is accomplished in conjunction with a field deployment or annual field training (AFT) emphasis will be placed on using data collected during the initial site survey for assigned DATCALS facilities.*



## *Chapter 7 (Added) (ANG)*

### *LIFE SUPPORT*

*7.1. (Added) (ANG) General. Even though BOS and life support is provided in most cases by the host service/wing, ATCSs personnel must anticipate living and working at locations devoid of permanent work centers or living shelters when supporting tactical operations. Under such conditions, erection and maintenance of required shelters may then become the responsibility of the deployed team.*

*7.2. (Added) (ANG) Unit Readiness. The unit commander should have the capability to provide BOS and life support equipment to all DOC-tasked UTCs if required/tasked.*

*7.3. (Added) (ANG) Employment. The ATCSs will be responsible for ensuring that the cantonment area and life support systems are adequate to support deployed operations keeping survivability in mind. In training exercises, ORE/ORIs the ATCS unit may be required to establish their own cantonment area. Use of AFM 10-100 is mandatory. When establishing a cantonment area, the following considerations will be observed.*

*7.3.1. (Added) (ANG) Work center areas must be in a location to provide maximum support to the deployed customer.*

*7.3.2. (Added) (ANG) Terrain, undergrowth, foliage, physical security, and need for camouflage should be prime considerations in selecting living areas. Living quarters and messing facilities should be on level, well-drained areas free of rocks, undergrowth and other debris if possible.*

*7.3.3. (Added) (ANG) Consideration should be given to easy access to work areas from the living area; however, ease of vehicle access, proximity to parking area, size, and convenience of the site itself coupled with security considerations may be overriding factors.*

*7.3.4. (Added) (ANG) Tent rows shall be separated by a fire lane sufficiently wide (20 ft minimum) to allow access to fire fighting equipment. To preclude fire from spreading, separate side by side tents a minimum of 10 ft.*

*7.3.5. (Added) (ANG) If tents stoves are required, fuel storage containers will be uniformly located at the tent side with maximum practicable safety determining the distance from the tent. Storage containers will be elevated sufficiently to provide even gravity flow.*

*7.3.6. (Added) (ANG) Fuel storage, if included in the cantonment area, should be at least 50 feet from the nearest vehicle or tent. If possible, fuel storage should be on ground that slopes away from tent areas. Bulk fuel will be stored as specified in Chapter 10.*

*7.3.7. (Added) (ANG) Communications and electrical wiring in the area should be neatly and uniformly installed, marked where practicable, in accordance with standard safety practices.*

**7.4. (Added) (ANG) Sanitation.** *Sanitation and messing facilities will be installed and maintained IAW AFI 48-107 when not subject to or conflicting with environmental protection regulations:*

**7.4.1. (Added) (ANG) Latrines** *should be at least 100 yards from messing facilities and 30 yards from the nearest living quarters. They should be downwind of living quarters if possible. Separate latrine facilities shall be established for deployed male and female personnel.*

**7.4.2. (Added) (ANG) Messing facilities** *will be established and dining hours posted. Personnel will not cook in their personal tents because of safety and sanitation hazards.*

**7.4.3. (Added) (ANG) A means for cleaning personnel mess gear** *will be provided at each meal. This will include a minimum of 5 GI trash cans – two for garbage; one with hot soapy water for washing; and two for hot water rising. Immersion heaters will be used to heat the water. This requirement may be waived by the site commander if MREs and or disposable utensils are provided.*

**7.4.4. (Added) (ANG) GI trash cans** *shall be located throughout the living quarters and work areas. Garbage pick-up and disposal will be done daily.*

**7.4.5. (Added) (ANG) Daily sanitary and safety inspections** *will be conducted by the First Sergeant and Safety NCO to ensure that the highest possible living standards are maintained.*

**7.4.6. (Added) (ANG) High weeds and underbrush** *will be cleared from the cantonment area.*

**7.5. (Added) (ANG) Priority for Installation.** *The cantonment area will be established as soon as possible after arrival on site, with respect to other mission essential operational priorities. For exercise purposes, cantonment living areas may be erected in advance of the actual deployment.*

**7.6. (Added) (ANG) Recovery.** *Team composition with respect to redeployment activities and cantonment area tear-down should be basically the same as for the installation and erection unless time and conditions dictate otherwise:*

**7.6.1. (Added) (ANG) Housekeeping items** *will be inventoried, packed and assembled according to vehicle/pallet inventory lists.*

**7.6.2. (Added) (ANG) A final policing of the area** *will be done prior to departure. Remaining trash and garbage will be removed from the site as appropriate.*

**7.7. (Added) (ANG) Potable Water Supply.** *A water supply free of contamination is essential for field operations. Water taken from any source is presumed to be contaminated and must be properly tested, and if required, treated before use. Once the water supply is determined safe, it is equally important that extreme care be taken to prevent contamination. Each ATCS will develop procedures to ensure that a contamination free water source is found and used for field exercises and deployable*

*water storage containers are thoroughly disinfected and rinsed before and after each deployment.*

### *Chapter 8 (Added) (ANG)*

#### **AIR TRAFFIC CONTROL OPERATIONS**

**8.1. (Added) (ANG) General.** *This chapter establishes standardized procedures for tactical air traffic control operations. In addition to this chapter ATCS shall comply with the contents of paragraph 5.1.1. and 5.2.2. of the basic manual to the extent possible when deployed.*

**8.2. (Added) (ANG) Unit Readiness.** *The CATCO will ensure that:*

**8.2.1. (Added) (ANG)** *All air traffic control personnel possess an Air Traffic Control Specialist (ATCS) Certificate and be medically qualified IAW AFI 48-123 while performing air traffic control duties. Ensure that each individual keeps the ATCS certificate on their person. Personnel performing air traffic control duties in a control tower facility must also possess an FAA Control Tower Operators (CTO) certificate.*

**8.2.2. (Added) (ANG)** *Air traffic control personnel are proficient in mobile equipment installation. Equipment training shall be conducted annually, for UTC assigned personnel. Accomplish this training by use of CBT, classroom, practical training, or a combination of these methods. Document training annually on unit developed preprinted AF Form 1098, Mobility Training.*

**8.2.3. (Added) (ANG)** *Current area aeronautical charts of at least 1:250,000 or 1:500,000 scale and Digital Terrain Elevation Data (DTED) CD-ROMs are available for specific wartime/contingency plans.*

**8.2.4. (Added) (ANG)** *Base and host nation war plans are reviewed at least annually. They must also be familiar with applicable portions of the Base Use Plan (Parts 1 and 2) and Survival Recovery and Reconstitution Plan.*

**8.3. (Added) (ANG) Preparation for Combat Operations.**

**8.3.1. (Added) (ANG)** *Ensure that the combat capability of the air traffic system and controllers (mobility training, mobility equipment, shot records, etc.) are included and evaluated during local and command exercises.*

**8.3.2. (Added) (ANG)** *Maintain liaison with exercise planners and assist in developing realistic objectives and scenarios that provide controllers the opportunity to train and assess combat readiness. Training shall be according to the supported command's threat environment and include performance while operating in full NBC ensemble.*

**8.3.3. (Added) (ANG)** *Where appropriate, work with the wing airspace manager to schedule temporary use of airspace to evaluate realistic combat launch and recovery methods, air defense assistance, EMCON procedures, minimum communications procedures, etc.*

**8.3.4. (Added) (ANG) Mobility Requirements.** *The following requirements must be available, completed, and/or verified:*

**8.3.4.1. (Added) (ANG)** *Ear plugs.*

**8.3.4.2. (Added) (ANG)** *Spectacles for chemical warfare (CW) Mask.*

**8.3.4.3. (Added) (ANG)** *Medical qualifications according to AFI 48-123 (AF Form 1042, Medical Recommendations for Flying or Special Operation Duty).*

**8.3.4.4. (Added) (ANG)** *AF Form 623.*

8.3.4.5. (Added) (ANG) *FAA Form 7220-1, ATCS Certificate.*

8.3.4.6. (Added) (ANG) *AC Form 8060-1, CTO Certificate (when applicable).*

8.3.4.7. (Added) (ANG) *Medical Record equivalents as prescribed by the Flight Surgeons Office.*

8.3.4.8. (Added)(ANG) *Special Experience Identifiers (SEIs) for the UTC deployed in/required.*

8.3.4.9. (Added)(ANG) *All deployable ATCALS personnel must possess a red U.S. Government Passport or have appropriate documentation completed and ready for processing on file in their unit.*

8.4. (Added) (ANG) *Deployment Procedures. The CATCO will ensure that:*

8.4.1. (Added) (ANG) *UTC team chief/other supervisors are thoroughly briefed on the deployed mission.*

8.4.2. (Added) (ANG) *Air traffic control administrative support kits are deployed.*

8.4.3. (Added) (ANG) *Sufficient personnel qualified in equipment are deployed to meet the required hours of operation as specified in AFI 13-203.*

8.4.4. (Added) (ANG) *Qualified personnel are designated to meet the TSN/CATCT/CSE requirements established in AFI 13-203.*

8.5. (Added) (ANG) *Employment. Deployed ATC facilities will adhere to FAAO 7110.65 (if applicable), AFI 13-203 (gaining MAJCOM supplement), negotiated host nation/gaining MAJCOM agreements, applicable ICAO documents and AFI 21-116. In time of conflict, deviations to standards may be required by tactical situation. Ensure that senior operational commanders authorize deviations. Submit waivers through the senior operational commander to the gaining MAJCOM.*

8.6. (Added) (ANG) *Certification at Temporary Locations. At deployment locations of less than 30 days a formal certification process is not required. Deploying controllers must successfully complete a Local Area Knowledge (LAK) guide test and complete positions certification checklists (PCC) for each position they are preparing to operate. In addition, the deployed TSN/CSE, appointed in writing by the CATCO, shall issue a Temporary Airman Certification (FAA Form 8060-4) to the applicant for temporary tower location.*

8.6.1. (Added) (ANG) *Annotate all position certifications and facility ratings obtained at temporary locations on AF Form 3622.*

8.7. (Added) (ANG) *Initial Certification Requirements. At deployment locations of more than 30 days ensure that the following initial certification process is accomplished:*

8.7.1. (Added) (ANG) *CTO Examiners for ATCSs must coordinate with the appropriate FAA region for CTO examiner authority when deployed longer than 30 days within the national airspace system (NAS) involving the control of live traffic.*

8.7.2. (Added) (ANG) *Certifications will be according to FAA Order 7220.1.*

8.7.3. (Added) (ANG) *Annotate all position certifications and facility ratings obtained on AF Form 3622.*

*8.7.4. (Added) (ANG) The CATCO has temporary certification authority for the TSN/CSE and one other controller. As a minimum, a local area knowledge guide and a position certification checklist shall be developed for use in the process. The TSN/CSE conducts certification on all other deployed controllers once they have completed all required training. Tactical situation may dictate for some or all controllers to be initially certified as outlined in Paragraph 8.6 above. A traditional certification program must be in place not later than day 30 of facility operations.*

*8.8. (Added) (ANG) CONUS Deployments/Exercises. Ensure that flight inspections are requested IAW AFMAN 11-225 (FAAO 8200.1). Consider ATCALS facilities ready for inspection when both maintenance and ATC operations agree that the facility is capable of providing ATC service and all installation and operational criteria have been met.*

*8.8.1. (Added) (ANG) NOTAM action concerning status of the commissioning and/or decommissioning flight inspection of DATCALS facilities will be IAW AFMAN 11-225 (FAAO 8200.1). Facility CCTLRs must establish procedures for notification of facility status through the appropriate NOTAM agency.*

*8.8.2. (Added) (ANG) Radar CCTLRs must ensure that minimum vectoring altitude charts are developed and available in the radar facility.*

*8.8.3. (Added) (ANG) ATC management writes appropriate LOPs to manage the deployed facility.*

*8.8.4. (Added) (ANG) Hours of operation will be determined/stated by the user command. Duty hours will conform to AFI 13-203 as the tactical situation permits.*

*8.8.5. (Added) (ANG) The CATCO or designated representative has the overall responsibility for the development of terminal instrument procedures (TERPS).*

*8.8.6. (Added) (ANG) Aircraft accident/incident procedures and reporting will be IAW AFI 13-203, AFI 91-202 and AFI 91-204.*

*8.9. (Added) (ANG) Recovery. The CATCO will ensure that:*

*8.9.1. (Added) (ANG) Appropriate NOTAM action is requested IAW AFMAN 11-225 when DATCALS facilities are to be decommissioned.*

*8.9.2. (Added) (ANG) Air traffic control operations personnel will complete recovery actions outlined in Chapter 3 and assist in other recovery actions as directed. Support kits will be recovered, inventoried, and stocked. Maintenance personnel will direct the equipment dismantling; packing and loading will be accomplished in a safe manner and IAW applicable technical orders.*

*Chapter 9 (Added) (ANG)***LOGISTICS**

**9.1. (Added) (ANG) General.** *This chapter provides logistics management guidance and establishes criteria and requirements. Directives concerning authorizations, preparation, installation, repair, and logistical support of mobility equipment are published in applicable USAF Allowance Standard (AS), Equipment Authorization Inventory Data (EAID), Communications-Electronics Maintenance Instructions (CEMI), and TOs. These policies, procedures, and directives will be followed to assure an optimal level of logistical readiness. The primary logistics objective is to ensure the availability of fully operative tactical DATCALS equipment and systems to satisfy wartime and contingency requirements and to logistically sustain those systems in a deployed environment. Additional objectives are to:*

**9.1.1. (Added) (ANG)** *Accomplish all maintenance actions at the lowest level consistent with mission requirements and cost considerations.*

**9.1.2. (Added) (ANG)** *Minimize transportation and civil engineering requirements.*

**9.1.3. (Added) (ANG)** *Self-sustain deployed mission equipment for a minimum of 30 days for investment items without re-supply.*

**9.1.4. (Added) (ANG)** *Be capable of deploying within established time frames in either road or air mobile configuration.*

**9.2. (Added) (ANG) Maintenance.**

**9.2.1. (Added) (ANG) Unit Readiness:** *All ATCS will be organized, staffed, equipped, and trained to accomplish authorized on-equipment and off-equipment maintenance on all assigned equipment with maximum self-sufficiency being the goal. Maintenance will be preformed IAW AFI 21-116 and applicable TOs. Resources needed to accomplish all authorized on-equipment/off-equipment maintenance will be organic to the ATCS unit. Depot maintenance requirements will be established, scheduled and processed IAW ANG/C4AM direction. Maximum use will be made of available automatic data processing (ADP) systems/products to enhance readiness and reduce costs. However, manual procedures will also be established to satisfy critical functions when ADP support may not be immediately available.*

**Table 9-2. Guidelines for Determining Camouflage Requirements**

**Equipment**

**MSN-7**

**MPN-14K/26**

**TRN-26/41**

**Q**

**22**

**NOTE:** *This table outlines the minimum amount of camouflage required for each listed UTC. Each ATCS unit should have on hand the Qty required in snow, desert and woodland camouflage. Requirements for BOS camouflage and other unit camouflage needs are up to each ATCS to determine.*

*9.2.2. (Added) (ANG) Mobility Preparation: Upon notification of a mission tasking, the Chief of Maintenance will ensure that all tasked DATCALs equipment is ready or made ready for deployment in timely response to mission taskings.*

*9.2.3. (Added) (ANG) Employment:*

*9.2.3.1. (Added) (ANG) Documentation of installation actions will be accomplished according to AFI 21-116.*

*9.2.3.2. (Added) (ANG) When a communications Maintenance Control function is deployed/available, or when assigned to a command other than the ANG, the deployed senior maintenance person for the ATCS will ensure that written procedures for maintenance and materiel control action reporting are established between units/gaining command.*

*9.2.3.3. (Added) (ANG) When a communications Maintenance Control function is NOT deployed/available, the senior maintenance person for the ATCS will ensure that each UTC tracks maintenance status for their UTC to as a minimum include job outage and any PMIs performed. This shall be accomplished through use of a master station log. When reach back capabilities exist, units may report to their home station job control.*

*9.2.3.4. (Added) (ANG) Primary and 100% back-up power must be available for each UTC. Where configuration permits, power may be pooled; however, these pooled facilities will provide primary and 100% back-up power. Where the configuration does not permit pooling, power units for primary and 100% back-up power will be located adjacent to each UTC piece of equipment.*

*9.2.3.5. (Added) (ANG) The team commander must coordinate with the host base support unit to ensure compliance with radiation hazard requirements as specified in T.O. 312-10-4.*

*9.2.3.6. (Added) (ANG) The senior on-duty maintenance technician of each facility will ensure that maintenance status is promptly submitted to the Maintenance Control or acting Maintenance Control function.*

*9.2.3.7. (Added) (ANG) A quality control program will be conducted for all assigned equipment. AFI 21-116 provides guidance for both the in-garrison and deployed quality control programs.*

*9.2.4. (Added) (ANG) Redeployment and Recovery. During redeployment, a "quick check" inventory of the equipment and support items should be conducted. This "quick check" inventory is not intended to be an item-by-item inventory such as the inventory conducted during the post-deployment inspection, but rather an inventory of major subassemblies, easy to misplace items, loaned items, etc. Examples are test equipment, communications cables, power cables, tent accessories, etc. Equipment will be post-deployment inspected, IAW detailed locally developed checklists, to meet 72 hour turn-a-round times. After all discrepancies and shortages are identified and corrective action has been initiated, the equipment can be considered ready for deployment.*



### 9.3. (Added) (ANG) Supply.

9.3.1. (Added) (ANG) Supply support concepts. ATCS will be equipped with Mobility Readiness Spares Packages (MRSP) to provide initial supply support of UTCs identified in WMP-3. Ensure a MRSP administrative package, to include as a minimum, management reports [i.e., R43 (Airborne MRSP Listing), R50 (Mission Support Kit Listing), R52 (Non-Airborne MRSP Listing), R66 (Automated Post-Post File)] and a computer, are deployed with each MRSP IAW AFMAN 23-110. Each UTC may be required to manage their own MRSP during initial deployments and therefore should have members trained to meet this requirement. Ensure MRSP details are transferred to the ACC Regional Supply Squadron (ACCRSS) or host computer support base (CSB), if tasked, IAW AFMAN 23-110. However, a deployment of MRSP of less than 30 days will normally be considered an exercise and accountability will remain with home station. Exception to this rule is when the deployment is overseas. The MRSP shall be transferred to the overseas gaining CSB. Basic guidance in AFMAN 23-110 will apply.

9.3.2. (Added) (ANG) Ensure that MRSP are configured to respond to the deployment tasking, and placed in a deployed status IAW AFMAN 23-110.

9.3.3. (Added) (ANG) Ensure that all necessary actions are taken to robust the MRSP, i.e., identified critical shortages with maintenance units, pursue lateral support, establish a cannibalization plan and accomplish cannibalization actions (actual and simulated), etc.

9.3.4. (Added) (ANG) Consumables. The term consumables refers to fuel, oil, lubricants, rations, and water. ATCSs must be prepared to both satisfy short notice deployments and/or provide consumable support of deployed UTCs as follows. Prior coordination will be effected with theater logistic elements to determine consumable support capabilities:

9.3.4.1. (Added) (ANG) Rations: ATCS must have the capability to obtain the required rations to sustain 3 days of deployed operations. When rations are required, they will be drawn from storage and issued to the team commander or their designated representative along with sufficient number of copies of blank rations issue/cash collection forms. Ration issue will be based on the number of personnel times the number of meals required to cover travel time and five days operation at the employment location unless otherwise tasked.

9.3.4.2. (Added) (ANG) Fuel, oil, lubricants. ATCS will ensure that sufficient fuel, oil, and lubricants are available to satisfy movement requirements, plus a minimum of 36 hours operation at the employment location. Units will have bladders or other containers required to move 36-hour supplies if not available at the port of debarkation or point of employment.

9.3.4.3. (Added) (ANG) Water. All UTCs will have the ability to store three days of water (four gallons per day, per person). All water containers should be filled at the last available water source per guidance received from the theater reception team. Water will be tailored out of the UTC if the operating location has an established source of potable water.

*9.3.5. (Added) (ANG) Contracting: ATCS deploying should have the flexibility and capability to use available commercial services and products to satisfy mission requirements. Contracting offers this capability. Where possible, ATCS should work with the contracting services of the supported MAJCOM/deployed Wing. However, in those instances where this is not feasible units may elect to request to deploy a qualified contracting officer to support the deployed UTCs. This option is most likely to be exercised with a major deployment. When individual equipment UTCs are deployed, the use of an IMPACT card may be required. If this is the case, ensure that procedures are established with your host wing contracting office to ensure proper use and tracking of purchases.*

## *Chapter 10 (Added) (ANG)*

### *SAFETY*

*10.1. (Added) (ANG) General. Personnel and equipment safety is of prime concern during all phases of an ATCS unit tactical operation. Safe practices shall not be violated for the purpose of expediting loading and unloading procedures, air or ground movements, or operations at the employment site. Exigency of conditions shall not be used as an excuse for bypassing safe procedures established in this chapter or Air Force Occupational Safety and Health (AFOSH) Standards (STD).*

*10.2. (Added) (ANG) Safety Representative. A safety representative shall be appointed for each deployment. If there is no full-time safety person deployed with AFSC 1S0X1, an additional duty safety representative shall be appointed in writing. Alternates may be required to ensure the availability of a safety representative at all times. Selected personnel will be thoroughly familiar with this chapter, applicable AFOSH STD and other safety directives, circulars and unit level safety guidelines. Training for deployments will be provided by the unit safety manager. When an assigned 1S0X1 does not accompany the deployed team, they shall make periodic visits to the exercise site, to provide guidance and perform safety inspections. The monitoring of safety practices will be accomplished during all phases of tactical operations.*

*10.3. (Added) (ANG) Layout of the Deployed Location. The deployed commander is responsible for the safeguarding of personnel and equipment during the establishment of the site, during operations and tear-down periods. UTC team chiefs will set up their respective UTC facilities in locations designated by the commander who must consider space required and location fixed by function requirements for safety of installation, operation and recovery. The safety representative will monitor compliance with the following paragraphs and will confer with the UTC team chief to resolve violations:*

*10.3.1. (Added) (ANG) Power cables will be grouped together to the extent possible and laid in such a manner as to create the least possible tripping hazard. Electrical power cable will be protected from vehicle traffic at all times. Flags, barriers, or other means may be used to warn of the location to prevent tripping.*

*10.3.2. (Added) (ANG) Communications cables should be laid out in a manner which precludes their running close to and or parallel to electrical power cables. Communications cable will be protected from vehicle traffic and will be laid in such a manner as to create the least possible tripping hazard. Communications cables should be run through secure areas to the maximum extent possible.*

*10.3.3. (Added) (ANG) An area will be designed for bulk fuel storage. The designated area will be located away from the vehicle parking area and downhill of operating equipment and cantonment area. Appropriate NO SMOKING and DANGER signs will be posted for non-vehicular bulk fuel containers (vehicular equipment will be marked IAW applicable T.O.s). Small tanks or fuel bladders will be enclosed by a dike having a net capacity of not less than that of the largest tank or bladder, plus 10% aggregate capacity of all other tanks or bladders served by the enclosure. Dikes will normally not be required for deployments of less than 30 days however portable blow-up kits are strongly*

*encouraged. Fuel will not be stored inside a tent or shelter. Grass, brush, or other debris will be cleared from fuel storage areas.*

*10.3.4. (Added) (ANG) If firearms and live ammunition are deployed, adequate means of protecting and securing these items will be provided, as outlined in Chapter 5.*

*10.3.5. (Added) (ANG) Generator sites should not be roped off, unless barricades are required to protect personnel from exposed high voltage or moving mechanical parts. These hazards do not normally exist when self-contained UTC generators are properly installed. Generator sites should be readily accessible to facilitate refueling and emergency operations. Post NO SMOKING and HEARING PROTECTION signs adjacent to generators as appropriate.*

*10.4. (Added) (ANG) Emergency Boards. Emergency boards described in AFOSH STD 91-50 will in most cases not fit in ground communication-electronic (C-E) UTC equipment. However, the requirement to have a safety board where high voltage is present will not be waived. Smaller boards or portable emergency safety kits may be used. Items that will not fit on the smaller boards may be placed elsewhere in the van or shelter where they are easily accessible and UTC personnel are aware of their location. Items subject to change (for example, emergency phone numbers and site safety operating instructions) can be put on the board after deployment. Emergency phone numbers should also be posted near each facility phone. The safety representative in coordination with UTC team chiefs may be required to write and disseminate safety OIs after arrival at new deployment locations.*

*10.5. (Added) (ANG) Electrical and Electrical Safety. UTC team chiefs will ensure assigned personnel are aware of electrical/electrical safety procedures applicable to their jobs and document using AF Form 55. UTC team chiefs shall have on file at the deployed location a copy of each deployed individual's AF Form 55.*

*10.6. (Added) (ANG) Safety Observer. Responsibilities for safety observers appear in AFOSH STD 91-50. Austere maintenance manning during deployments may make it necessary to use operations personnel for safety observers. When a safety observer is not proficient in the task being observed, the maintenance person will brief the observer on the location of circuit breakers and safety equipment and its use. Safety observers must be qualified in CPR, SABC and be familiar with local procedures to obtain medical assistance.*

*10.7. (Added) (ANG) Clothing and Jewelry. Personnel working around electrical circuits, regardless of location, will not wear rings, watches, metal rimmed glasses, or other metal objects. Watches and rings will not be worn by personnel detailed to set-up the cantonment area or other facilities. When antennas or similar structures are to be installed, workers will be required to wear an approved construction hard hat or combat helmets. Gloves will be worn by personnel setting up cantonment areas or erecting antennas or masts. Personnel required to work on high voltage equipment will wear approved electrical hazard safety shoes or use approved rubber matting. Ear protection is required for power production personnel when working on running generators. Safety toe shoes will be worn during pre-deployment, post-deployment, equipment/facility set-up and tear down, and during operations that present a potential crushing hazard to feet. Guidance on use of foot protection and other personal safety equipment may be found in AFOSH STD 91-31.*

*10.8. (Added) (ANG) Grounding for Fuel Services. Basic procedures for grounding fuel serving vehicles when dispensing fuel require that the dispensing vehicle to be grounded via a ground cable/reel and the dispensing vehicle be bonded to the tank receiving the fuel. Bonding is accomplished by ensuring that the fuel dispensing nozzle is in constant contact with the pipe filler of the tank. There is no requirement to ground fuel serving vehicles other than during transfer. Additional information regarding ground requirements can be found in applicable T.O.s.*

*10.9. (Added) (ANG) Heaters. Extreme care must be taken to ensure that tent and/or shelter heaters are properly installed IAW appropriate heater T.O.s. Vent pipes and stove burner pots must be isolated from tents flaps, flooring, dry grass and other flammable materials such as cots and personal gear. Stove pipes must extend at least 3 feet above tent ridges and be secured with noncombustible materials. Spark arrests will be added where required. ATCSs shall ensure that 24-hour fire watches are established when tent heaters are in use.*

*10.10. (Added) (ANG) Fire Extinguishers. An adequate number of fire extinguishers will be provided and placed at strategic points. Extinguisher types will match the type material to be protected. Extinguisher will be located next to all power generator units. Water type fire extinguishers will be filled and installed as soon as possible after tent erection. Tents and shelters that have electrical equipment or store supplies will have both water type extinguishers plus those to extinguish fires that can not be put out with water-type extinguishers. Vans, vehicles and trailers will be equipped with fire extinguishers as prescribed in their respective T.O.s.*

*10.11. (Added) (ANG) Antennas. Antenna will be erected and torn-down by closely following applicable T.O. procedures. Missing key steps or performing tasks out of sequence can cause loss of time or create severe unsafe conditions. Overhead power lines must be considered when determining antenna location. A clearance equal to the length of the antenna mast, plus a minimum of 50 feet from the overhead power line is required. To prevent personnel or vehicles from running into guy wires, these wires must be clearly marked. Roping off the antenna area is required when a radiation hazard exists. Signs shall be posted to warn of the hazard.*

*10.12. (Added) (ANG) Aircraft Loading/Unloading Procedures. The aircraft loadmaster has the primary and final responsibility for loading/unloading operations. ATCS personnel should provide information unique to assigned UTC equipment to aid the loadmaster in determining the safest manner of loading/unloading the aircraft. If ATCS personnel are required or directed to use unsafe practices or load/unload aircraft in an unsafe manner during deployments, the NCOIC of the loading crew will point out the unsafe practice to the loadmaster. If the unsafe practice continues the ATCS NCOIC will stop his crew and request immediate assistance from the senior ATCS person on site.*

*10.13. (Added) (ANG) Tone-down. Due to the use of subdued equipment and materials found in the tactical environment, each ATCS unit shall develop its internal safety procedures to compensate for the tone-down program.*

## *Chapter 11 (Added) (ANG)*

### *TRANSPORTATION*

**11.1. (Added) (ANG) General.** *The ATCS unit commander shall appoint a unit Vehicle Control Officer in writing. The unit VCO is the focal point for all vehicle related activities, including vehicle operator training and vehicle readiness. The VCO's specific vehicle management responsibilities are outlined in AFI 24-301 and AFI 24-317 and as directed by the host wing VCO. In addition, the ATCS VCO will:*

**11.1.1. (Added) (ANG)** *Monitor mission requirements to ensure that vehicle authorizations are adequate, and submit necessary documents to update/change current vehicle authorizations (vehicles include prime movers, mobilizers, and trailers).*

**11.1.2. (Added) (ANG)** *Provide a continuing objective assessment of the unit's road mobile capability and ensure that the commander is apprised of that assessment.*

**11.1.3. (Added) (ANG)** *Serve as the Wing focal point to provide training to various work center vehicle trainers for all vehicle types required by the various work centers to mobilize or transport assigned systems and equipment. Keep a listing of all unit vehicle instructors including name and type vehicle they are instructor qualified on.*

**11.1.4. (Added) (ANG)** *Ensure that unit personnel are convoy trained to include participating in an actual convoy of no less than 3 vehicles for a minimum of 25 road miles.*

**11.1.5. (Added) (ANG)** *Issue UTC vehicles to each work center VCO for which they are assigned.*

**11.2. (Added) (ANG) ATCS Deployment Planning Factors.** *Transportation requirements for ATCS unit assets being deployed in theater will be provided upon arrival. Therefore, generic cargo hauling/load-towing M-series prime movers (e.g., 2-1/2 ton and 5 ton) no longer automatically deploy overseas with ATCS UTCs, nor are they any longer identified in the UTCs logistics detail (LOGDET). The exception to this rule is that embedded vehicles (e.g., M-998s; trailers carrying generators; and carriages with radar-mounted systems) remain in their respective UTCs, and always deploy with the UTCs. The result is air mobile configured UTCs more suited to an airlift resource constrained wartime environment. Vehicle UTCs comprised of the generic M-series prime movers will deploy overseas only when called out by the overseas theater planners.*

**11.2.1. (Added) (ANG)** *With reductions in ATCS vehicle fleets it is not feasible to have the appropriate types/quantities/combinations of vehicles sufficient to attain full road mobility for all DOC-tasked UTCs for the purposes of training exercises. It is therefore necessary for units to plan for the following when an exercise involving road mobility is scheduled:*

**11.2.1.1. (Added) (ANG)** *Budget for the funds necessary to have the bulk of required UTC resources moved via commercial road haul.*

**11.2.1.2. (Added) (ANG)** *Budget for the funds necessary to have the bulk of required UTC resources moved via a sister service transportation company.*

*11.2.1.3. (Added) (ANG) Budget for the funds necessary to lease commercial vehicles required to move UTC resources.*

*11.2.1.4. (Added) (ANG) Enter into an agreement with a sister service for the loan of tactical M-series vehicles for the purposes of road mobility exercises.*

*11.2.2. (Added) (ANG) ATCS should attempt to form at least one convoy out of existing vehicles resources (owned or borrowed) during road mobility exercises to ensure that personnel maintain minimal proficiency in convoy operations. 297 ATCS is exempt from this requirement as state law prohibits convoy operations.*

*11.3. (Added) (ANG) Convoy Security and Communications. Deployment convoys are used during peacetime deployments for training. Security should always be incorporated in all phases of pre-deployment, deployment, and recovery whether for exercise training or real-world deployments. If an off-base convoy is anticipated during any phase of the tactical deployment, the following security procedures should be implemented:*

*11.3.1. (Added) (ANG) Always identify two convoy routes: one primary and one alternate.*

*11.3.2. (Added) (ANG) Identify and pre-designate emergency stopping location such as civilian police stations, military installation, etc.*

*11.3.3. (Added) (ANG) Continually assess convoy security during movement. Consider the terrain, size of the convoy, the route, assets involved and nature of the threat.*

*11.3.4. (Added) (ANG) In the event of hostile engagement, all vehicles in the convoy should proceed at an increased speed to exit the area promptly. If, however, the convoy must halt, prearranged plans must be implemented. In addition, friendly forces must be alerted to provide backup response if available.*

*11.3.5. (Added) (ANG) Security police, state and local civilian authorities will be notified of convoy movements by route (primary and alternate), estimated time of departure from the installation and the arrival at the employment location. This should be accomplished by the host installation mobility officer.*

*11.3.6. (Added) (ANG) A method of communications, either radio or manual signals, will be used to provide proper notification and response if an attempt is made to delay or halt the convoy.*

*11.3.7. (Added) (ANG) Procedures for handling or responding to hostile situations must be pre-arranged and rehearsed. The possibility of terrorist action against the convoy to gain possession of assets must not be ruled out.*

*11.4. (Added) (ANG) Vehicle Safety and Operating Procedures. Vehicle safety must be strictly adhered to during the marshalling, convoy movement, employment, redeployment and recovery phases. Mission requirements demand successful movement of personnel and equipment in a safe and efficient manner. Losses directly related to improper vehicle maintenance or operations are senseless when preventive maintenance and driver education could have prevented their occurrence. Prime movers and all vans, mobilizers and trailers must be mechanically sound and properly connected. Loads must be properly placed and secured. Drivers and assistant drivers must know and abide by all traffic safety rules and regulations. AFJMAN 24-306 was used to compile the following subparagraphs. These subparagraphs constitute basic guidelines and do not eliminate the responsibility to read the*

*entire AFJMAN 24-306. Units will use the information in this chapter and the aforementioned directive to establish local OIs and check sheets on vehicle safety. Coordination with the civilian community and/or the base safety office will be accomplished to facilitate the inclusion of hazards unique to your geographical area in the operating instructions:*

*NOTE: A convoy is construed to mean six or more (15 maximum) military vehicles.*

*11.4.1. (Added) (ANG) Marshalling. The following procedures will be complied with either prior to and during the marshalling phase:*

*11.4.1.1. (Added) (ANG) An individual in each convoy will be designated as convoy commander. A convoy is construed to mean six or more military vehicles traveling together between military installations or designated off-base points.*

*11.4.1.2. (Added) (ANG) The convoy commander will confer with local deployment planners as possible before the convoy's departure to:*

*11.4.1.2.1. Determine departure time.*

*11.4.1.2.2. Establish convoy routes.*

*11.4.1.2.3. Select rest points and overnight stops.*

*11.4.1.2.4. Determine estimated time of arrival at the final destination.*

*11.4.1.2.5. Receive a briefing on any convoy procedures not otherwise covered in this manual or local procedures.*

*11.4.1.2.6. Obtain marked road maps (the convoy commander and lead vehicle must have marked road maps). On large convoys, it may be desirable to distribute more marked maps to prevent confusion if unavoidable gaps in the convoy occur.*

*11.4.1.2.7. Obtain copies of convoy procedures and directives. One set will be provided for each prime mover in the convoy.*

*11.4.1.2.8. Obtain credit cards for gas, oil and services from the vehicle dispatcher.*

*11.4.1.3. (Added) (ANG) Proper highway authorities must be notified in advance of convoy road movements. When deployments are not of emergency or no-notice nature, this should be accomplished during the initial planning phase.*

*11.4.1.4. (Added) (ANG) ATCSs will ensure that a minimum of two qualified personnel are assigned to each vehicle for convoy operations. However, after considering such safety factors as weather conditions and length of convoy, etc., the unit commander may authorize the substitution of a non-qualified driver to act as a safety observer in a vehicle if a second qualified driver is unavailable. Where two qualified operators are assigned, each will have a valid US Government Motor Vehicle Operator's Identification Card annotated with the types of vehicles they are qualified to operate. This must correspond to the type of vehicle they are assigned to operate.*

*11.4.1.5. (Added) (ANG) The convoy commander or designated briefing officer will brief the vehicle operators on the proposed route, departure time, estimated arrival*



*time, and maximum speed on the road. Drivers of vehicles transporting hazardous materials will be briefed on their responsibilities. Emphasis will be given to the drivers and assistant drivers on their responsibilities to operate their vehicles in a safe manner. Breakdown procedures will also be reviewed.*

*11.4.1.6. (Added) (ANG) The driver and all passengers (excluding passengers in the rear of M-series vehicles not equipped with rear seat belts) will fasten their seat belts prior to vehicle movement. The senior person in each vehicle will ensure that seat belts are utilized (including shoulder straps when available).*

*11.4.1.7. (Added) (ANG) During convoy assembly, headlights and clearance lights on all vehicles will be on while engines are running.*

*11.4.1.8. (Added) (ANG) Spotters will be utilized to the maximum extent during marshalling maneuvers and during all backing operations. It is recommended that spotters be used for any movement of vehicles in highly congested areas.*

*11.4.1.9. (Added) (ANG) All tactical vehicles assigned/used by an ATCS should have chocks available as required.*

*11.4.1.9.1. Chocks will be used to secure all vehicles and wheeled equipment when they are left parked and unattended on aircraft parking ramps or near the flight line.*

*11.4.1.9.2. When loading or unloading aircraft, pre-positioned wheel chocks will be placed between the aircraft and approaching vehicle to prevent vehicles from striking the aircraft.*

*11.4.1.9.3. M-35 vehicles must be parked in neutral gear and chocks employed (the engine may start if vehicles move slightly while transmission is in gear).*

*11.4.1.9.4. Chocking does not eliminate the requirement to employ prime mover and towed load parking brakes.*

*11.4.1.9.5. AFJMAN 24-306 illustrates use of chocks when parked uphill or downhill. On level ground, chocks will restrict movement in either direction.*

*11.4.1.9.6. Chocks should be long enough (or have a piece of rope attached) to preclude the need for the operator to put any part of his body under a wheel when installing or removing the chocks.*

*11.4.1.10. (Added) (ANG) A cotter pin will be installed on the pintle hooks of all vehicles*

*11.4.1.11. (Added) (ANG) Escort vehicles protecting the front and rear of the convoy will be equipped with warning signs. The lead vehicle will carry a suitable sign made of light reflective material to warn oncoming drivers that a convoy is following. The rear vehicle will display a light reflective sign to warn approaching drivers that a convoy is immediately ahead. These signs and any other signs or other devices required by local directives will be affixed to the vehicles in a manner that will preclude their falling off. Bolting the devices on is considered most practical.*

*11.4.1.12. (Added) (ANG) The right and left outside leading edges of overhanging or projected loads will be marked with red flags during daylight or periods of good visibility, and with amber lights after dark or when visibility is restricted. The right and left outside rear edges of overhanging loads will be marked with red flags where they can be clearly seen by overtaking drivers, and with red lights after dark or during periods of limited visibility. When loaded equipment does not overhang on either side of the vehicle or project more than four feet to the rear of a cargo bed, an additional warning light or flag is not required.*

*11.4.1.13. (Added) (ANG) Air Force motor vehicles capable of carrying 10 or more persons or with a rated capacity of more than one ton and vehicles of lesser capacity that regularly operate over public highways at night must be equipped with approved highway warning kits. Convoys will be equipped with one kit for each 10 vehicles, a minimum of two kits per convoy. At least one kit must be carried in the trail vehicle.*

*11.4.1.14. (Added) (ANG) Cargo carrying vehicles with a rated capacity of one ton or more will have an approved standard type fire extinguisher suitable for class B and C fires. The fire extinguishers will be placed where they will be easily accessible. Also, they will be secured with a clamp or other device with a quick-release latch.*

*11.4.1.15. (Added) (ANG) Vehicle pre-operational inspections will be performed and annotated on AF Form 1800, Operator's Inspection Guide and Trouble Report. Inspections will conform to standards and procedures outlined in Air Force 24-series publications; and the vehicle technical manuals. Basic safety precautions include:*

*11.4.1.15.1. (Added) (ANG) Latch hood open before checking engine compartment and latch closed after completion.*

*11.4.1.15.2. (Added) (ANG) Kill engine and employ chocks, parking brakes and spotters before close inspection underneath the vehicle.*

*11.4.1.15.3. (Added) (ANG) Removing watches, rings and jewelry before climbing on /vehicle or load or checking the battery or electrical systems.*

*11.4.1.15.4. (Added) (ANG) Refusing to operate defective or unsafe vehicles (all discrepancies will be reported to the unit VCO for corrective action or vehicle replacement prior to convoy movement).*

*11.4.1.16. (Added) (ANG) It is the operator's responsibility to ensure that their vehicle is properly loaded and the load is secured. AFJMAN 24-306, Manual For The Wheeled Vehicle Driver, provides guidance in this area.*

*11.4.2. (Added) (ANG) Convoy movement. The following procedures will be complied with during convoy movement:*

*11.4.2.1. (Added) (ANG) Fatigue is a major contributing factor to accidents. Trip planning must allow for:*

*11.4.2.1.1. (Added) (ANG) Ten minute rest stops for each 50 minutes on the road at intervals not greater than 2 hours of driving time.*

*11.4.2.1.2. (Added) (ANG) Maximum utilization of daylight hours.*

*11.4.2.1.3. (Added) (ANG) Maximum of 350 miles of driving per day.*

*11.4.2.1.4. (Added) (ANG) Maximum of 8 hours driving for one driver or 10 hours driving for two qualified drivers following an 8-hour off duty period.*

*NOTE: The team commander will take previous shift schedules into consideration when making driving assignments.*

*11.4.2.2. (Added) (ANG) Maximum convoy vehicle speed is 45 miles per hour. (Exception: Maximum speed for the convoy including the MPN-14 K element is 25 miles per hour).*

*11.4.2.3. (Added) (ANG) The proper interval between vehicles in a convoy will be such as to maintain a minimum of a 2 second interval between vehicles.*

*NOTE: 11.4.2.2. and 11.4.2.3. do not allow for awkward loads, heavy loads, or adverse road or weather conditions. Slow down and increase interval to compensate for these factors as well as for darkness, ice, snow, rain, sleet and construction areas.*

*11.4.2.4. (Added) (ANG) Vehicles will operate with their headlights on during day and night convoys.*

*11.4.2.5. (Added) (ANG) When possible, radio communications will be utilized between the lead vehicle and rear vehicle of the convoy.*

*11.4.2.6. (Added) (ANG) Convoy halts should be made where all vehicles can get clear of the roadway safely. If it is necessary to halt on the road, the assistant driver should be designated as guard to warn other traffic. Completely shut down engines when at a dismounted stop.*

*11.4.2.7. (Added) (ANG) A wrecker vehicle and motor vehicle maintenance personnel should, if available, accompany large convoys. The vehicle's position in convoy will be near the escort vehicle protecting the rear of the convoy. Civilian telephone numbers of US and/or allied military installations (motor pools) along the convoy route will be made available to vehicle operators in the event assistance is required due to vehicle breakdown.*

*11.4.2.8. (Added) (ANG) If a vehicle fails to operate while in a convoy, follow these basic rules:*

*11.4.2.8.1. (Added) (ANG) Signal a stop and pull off the road.*

*11.4.2.8.2. (Added) (ANG) Signal vehicles behind to proceed.*

*11.4.2.8.3. (Added) (ANG) If possible, correct the trouble, overtake the convoy at a safe speed, and fall back into the column at one of the breaks*

*(halts). If the trouble cannot be repaired by the driver, wait for the trailing vehicle and inform them of the difficulty.*

*11.4.2.8.4. (Added) (ANG) Immediately pull out warning flares or reflectors if the vehicle is not completely clear of the road. The assistant driver will post themselves at a safe distance to the rear of the vehicle to warn oncoming drivers of the hazard ahead.*

*11.4.2.9. (Added) (ANG) Use convoy signals as illustrated in AFJMAN 24-306. During night operations use appropriate flashlights. Red lenses may be used during tactical deployments IAW AFJMAN 24-306.*

*11.4.2.10. (Added) (ANG) Drivers shall refrain from eating, drinking or smoking while driving.*

*11.4.2.11. (Added) (ANG) Barbiturates, antihistamines, and other medicines in common use impair driving ability. Personnel will not be assigned as drivers or assistant drivers while taking such medication. If in doubt about the effects of certain drugs, consult a doctor or pharmacist.*

*11.4.3. (Added) (ANG) Employment. Vehicles deployed with a unit will be used for required transportation in and around the employment area. Additional vehicle support required should be requested from the supporting host base. The following procedures will be complied with during the employment phase:*

*11.4.3.1. (Added) (ANG) After all equipment is properly unloaded and placed IAW the site verification team or team chief's instructions, all nonessential prime movers will be parked and secured. A parking area should be designated where easy surveillance can be accomplished; for example, close to the cantonment area or work areas.*

*11.4.3.2. (Added) (ANG) Vehicles that must be used for day-to-day operations at the employment site (refuelers, personnel transportation to job sites, etc.) must be operated and maintained in the same manner as work center vehicles at home station. The following procedures apply:*

*11.4.3.2.1. (Added) (ANG) Vehicles will be used for official business only.*

*11.4.3.2.2. (Added) (ANG) Vehicles will be driven at a safe speed at all times. Speed in the cantonment and work areas will not exceed 10 MPH. Speed on pre-designated routes between work areas will be determined by the team commander and briefed to all drivers.*

*11.4.3.2.3. (Added) (ANG) Pre-operational inspections of vehicles will be made by each new driver and at a minimum of once each day. Unsatisfactory findings will be brought to the attention of the deployed VCO.*

*11.4.3.2.4. (Added) (ANG) Vehicle operators will be instructed on the location of DATCALS facilities. Vehicles will not be operated or parked in the path of radar or radio beams used for aircraft navigation.*

*11.4.3.2.5. (Added) (ANG) Vehicles will not be operated off of predetermined routes established by the team commander. Communications and power cables crossing the predetermined routes will be buried or otherwise protected from vehicular traffic.*

*11.4.3.2.6. (Added) (ANG) Nighttime driving at the employment location is extremely hazardous. Emphasis should be given to scheduling the majority of operations during daylight hours; for example, refueling and garbage runs, supply runs, etc.*

*11.4.3.3. (Added) (ANG) Employment near flightlines. The following procedures will be strictly adhered to when the employment includes the necessity for operating vehicles near or on the flightlines IAW AFI 13-213, Airfield Operations and Base Operations and AFJMAN 24-306:*

*11.4.3.3.1. (Added) (ANG) Rocks are frequently picked up by tactical vehicle tires (especially between duals) traveling over unpaved surfaces. Operators will perform a FOD check prior to driving on the flightline.*

*11.4.3.3.2. (Added) (ANG) Operators will ensure that their load is properly stowed and secured before proceeding onto the flightline.*

*11.4.3.3.3. (Added) (ANG) Vehicles will only pass under parked aircraft during loading or unloading operations. Movements of this nature must be under the observation of the aircraft loadmaster or their designated representative. During other times, vehicles are prohibited from passing under any part of a parked aircraft.*

*11.4.3.3.4. (Added) (ANG) Vehicles will never be backed in the direction of a parked aircraft except during loading or unloading. In these cases, a spotter will always be used. Chocks will be positioned between the vehicle and the aircraft to prevent vehicles from rolling into aircraft.*

*11.4.3.3.5. (Added) (ANG) Speed limits for motor vehicles will be a maximum of 15 mph or as otherwise posted when operating on the flightline. Special-purpose vehicles will never be driven faster than 10 mph on the flightline. The speed limit for all vehicles will never exceed 5 mph when driving within 10 feet of aircraft.*

*11.4.3.3.6. (Added) (ANG) Vehicle headlights shining towards a moving aircraft at night will be turned off immediately so the pilot will not be blinded or his night vision affected. Parking lights will be left on so the vehicle position will be known, and the headlights will remain out until the aircraft is out of range.*

*11.4.3.3.7. (Added) (ANG) Operators of vehicles crossing runway will come to a complete stop behind aircraft hold lines or 100 feet from the runway and will not proceed until they have received clearance from the tower.*

*11.4.3.3.8. (Added) (ANG) Passengers in vehicles operated on the flightline should be particularly alert and act as eyes and ears for the driver.*

*11.4.3.3.9. (Added) (ANG) Personnel and vehicles will stay at least 25 feet away from jet engine intake ducts. No personnel or vehicles will pass behind running jet engines at a distance closer than 300 feet.*

*11.4.3.3.10. (Added) (ANG) Vehicles will be chocked when left parked or unattended on the ramp.*

*11.5. (Added) (ANG) Redeployment and Recovery Operations. People tend to get careless during this phase, especially during preparation for a convoy. They want to tear down and get on the road quickly. This will be discouraged by the Safety NCO and the UTC team chiefs. All the precautions taken during the marshalling phase, including proper loading and load securing, apply. The return convoy operations must be accomplished as safely as the deployment convoy. The team commander, first sergeant, deployed VCO and all convoy commanders will meet prior to tear down to determine departure times, rest stops, etc. A review of paragraphs in this chapter addressing Convoy Security and Communications, Vehicle Safety and Operating Procedures, and Cargo Tie-down/Protection Procedures, should be accomplished and applied to this phase:*

*11.5.1. (Added) (ANG) The team commander will coordinate with the host commander and local airlift terminal personnel, as required, to facilitate the orderly recovery/redeployment of assets. If on a stand-alone deployment this coordination will be accomplished with home station and the deployed staff.*

*11.5.2. (Added) (ANG) Team commander will ensure that maximum assistance is provided to the airlift terminal personnel/aircraft loadmaster to ensure rapid recovery when deploying by military aircraft. Deployed personnel will assist in loading/off-loading, as required.*

*11.5.3. (Added) (ANG) If recovery/redeployment is by road, the deployed convoy commander will ensure that the convoy is properly loaded prior to departure.*

**11.6. (Added) (ANG) Pallet and Cargo Tie-down Protection Procedures.**

*11.6.1. (Added) (ANG) Over-the-road movement of built-up pallets will be accomplished only in accordance with the instructions in paragraph 11.6.3. below.*

*11.6.2. (Added) (ANG) The following general guidance is provided to assist vehicle operators with pallet and cargo tie-down and protection procedures. In accordance with AFJMAN 24-306 vehicle operators are responsible for cargo from the loading point until receipt at its destination. They are also responsible for protecting the cargo against the elements and pilferage. The operators must also determine if permits are required for special loads such as oversize, overweight, hazardous cargo, etc. As pallet loads and cargo items come in many different sizes and weights, it is difficult to provide a standardized tie-down method; however, the principles provided here, combined with good common sense and with the guidance in AFJMAN 24-306 should cover the majority of situations. Basically, cargo must be secured in such a manner as to prevent any fore, aft, or vertical movement.*

*11.6.3. (Added) (ANG) When transporting 463L pallets, the operator must ensure that the following procedures (over and above those in AFJMAN 24-306) are complied with:*

*11.6.3.1. (Added) (ANG) All 463L pallets are placed on adequate three point dunnage (4"X4"X88" wood beams).*

*11.6.3.2. (Added) (ANG) The 463L pallet is secured to prevent shifting, loss of load, or damage to any part of the pallet en route. A pallet damaged or warped during the road haul could cause the pallet to jam during the loading into the aircraft 463L rail system, causing unnecessary delay and loss of a critical asset, the pallet itself.*

*11.6.3.3. (Added) (ANG) Driver must check loads and tie-downs during rest stops to ensure that no shifting has occurred.*

*11.6.3.4. (Added) (ANG) Only stock-numbered truck or aircraft cargo tie-down chains, binders, straps, devices, etc. will be utilized to secure cargo to the bed on the vehicle. Only the tie-down points provided on the vehicles specifically for that purpose will be used IAW the operator's T.O. Under no circumstances will tie-down devices be routed under the chassis of vehicles, or placed in a manner that would cause the load to shift.*



*Chapter 12 (Added) (ANG)*  
**SITE SURVEY AND VERIFICATION**

*Section 1A -- General*

*12.1. (Added) (ANG) General. Guidance and requirements for conducting initial site survey and follow-on site verification are contained in this chapter. Site surveys teams (SST) sent to perform initial surveys to determine/confirm conditions at possible/actual employment locations and to facilitate siting for future tactical operations. Site verification teams (SVT) are sent out just prior to site activation to confirm that conditions which existed at the time of the site survey are unchanged or to make adjustments to planned site layouts to accommodate changes which have occurred subsequent to the initial site survey. The time available to conduct a site survey and develop complete site data will be determined by the contingency operation supported. Time constraints may require performing site surveys and site verification concurrently.*

*12.2. (Added) (ANG) Training. ANG/C4A shall provide SST/SVT training as required to meet basic team surveying requirements. The ANG Site Survey Course will consist of as a minimum, basic concepts of survey to include tabletop surveys, equipment sitting criteria, airport sitting criteria (both military and civil), survey equipment operation and a graded practical field survey exercise. SST/SVT training will be documented using the ANG Command JQS 004, Site Survey. ANG personnel must have completed the ANG Site Survey Course prior to being assigned to any site survey team.*

*Section 12B -- Site Survey*

*12.3. (Added) (ANG) Function. Preplanning is vital prior to an actual survey and/or deployment. Available maps should be obtained for sites under consideration to allow for the pre-selection of possible equipment locations. The conducting of tabletop surveys to identify these locations is highly recommended. For stand-alone deployments the SST/SVTs may be tasked to develop the entire site layout. Initial pre-planning must be comprehensive to ensure that the site is capable of supporting the planned operation (see attachment 4). The most important considerations to look for on a site survey will be site access, site security, drainage, sufficient area availability, and proper siting for the DATCALs equipment to be deployed. Other sitting considerations are also listed in attachment 4.*

*12.4. (Added) (ANG) Team Composition. Any person/AFSC assigned to the deploying UTC may be an ATCS deployment site survey team member: Teams should normally consist of the following personnel, but not necessarily be limited to those listed:*

<i>2 - 1C1X1</i>	<i>Air Traffic Controller (at least 1 should be familiar with TERPS requirements)</i>
<i>1 - 2E0X1</i>	<i>Ground Radar Maintenance</i>
<i>1 - 3E1X1</i>	<i>Power Production</i>
<i>1 - 2E1X2</i>	<i>Ground NAVAID Maintenance</i>
<i>1 - 2E190</i>	<i>Comm Systems Superintendent</i>

*Personnel selected for the site survey team should be qualified in the use of unit survey equipment and be knowledgeable of the total requirements of a site. Teams may be as small as 2 Air Traffic Control and 1 Radar Maintenance personnel, which is normally the case, or as tasked.*

*12.5. (Added) (ANG) Equipment. Each ATCS shall train and equip at least one SST/SVT to properly site DATCALs within defined standards and collect the data required IAW Attachment 4 to this manual. In addition to the basic Equipment Distant Measuring (EDM)/transit, compass survey equipment and unit developed support kits, team capabilities should include GPS, and digital photography equipment.*

#### *Section 12C - Site Verification*

*12.6. (Added) (ANG) General. The SVT will verify previous siting data and make adjustments to equipment and facilities placements based on existing site conditions and other factors affecting the pending operation. The SVT will be made up of personnel assigned to the UTCs deploying to the site.*

*12.7. (Added) (ANG) Function. The SVT will make final adjustments to locations for equipment as necessary. They will make required relocations, adjustments, and corrections to pre-survey plans. SVT communications with rear headquarters will be established as directed in the air tasking order. The SVT will provide siting guidance for all oncoming DATCAL communications facilities.*

*12.7.1. (Added) (ANG) The SVT must ensure an integrated team effort relying on technical expertise from selected AFSCs. The SVT must prepare/update a map showing the final placement of all deployed equipment and support facilities. Where deployments are at active airfields, maps will show the location of all equipment and facilities from taxiways and runways as well as the heights of communications antennas. This information will be analyzed by the senior 1C1X1/13M3 present to ensure that AFI 13-203 and siting criteria are not being violated. Waivers will be requested if the criteria cannot be met. At FAA Part 139 airports FAA Form 7260-1, Notice to Construct shall be developed NLT 120 days prior to deployment IAW FAR Part 77.*

*12.7.2. (Added) (ANG) The senior 1C1X1/13M3 will ensure that appropriate coordination is effected with the airport/airfield manager. This coordination will be effected as soon as possible. During the initial employment, this information may be relayed verbally, but must be followed up with a map as soon as practical.*

DANIEL JAMES III, Lieutenant General, USAF  
Director, Air National Guard

OFFICIAL

DEBRA N. LARRABEE, Colonel, USAF  
Chief, Support Services

**Attachment 1****GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS*****References***

The following references are specifically applicable to this manual:

Joint Operations Planning and Execution Systems (JOPES), Vol 1

AFI 38-205, Managing Wartime and Contingency Manpower

AF/XO-SC, Program Guidance Letter, Organization of Air Force Deployable Command, Control, Communications, and Computers (C4) and Deployable Air Traffic Control and Landing Systems (DATCALs) Force Structure

Joint Pub 3-52, Vol 1, Doctrine for Joint Airspace Control in the Combat Zone

AFDD-12, Aerospace Control

ACCG/USAFE/PACAF 50-38, Integrated Combat Airspace Command and Control (ICAC2)

AFMAN 10-401, Operation Plan and Concept Plan Development and Implementation

USAF War Mobilization Plan, Vol 1 and Vol 3

AFI 13-203, Air Traffic Control

AFI 13-213, Airfield Operations and Base Operations

AFI 10-215, Personnel Support for Contingency Operations

***AFI 31-207, Arming and Use of Force by Air Force Personnel (Added) (ANG)***

***AFJMAN 24-306, Manual for the Wheeled Vehicle Driver (Added) (ANG)***

AFMAN 11-225, US Standards for Flight Inspections

AFMAN 11-230, Instrument Procedures

***AFMAN 23-110, USAF Supply Manual (Added) (ANG)***

AFM 55-9, US Standards for Terminal Instrument Procedures

AFH 10-416, Personnel Readiness and Mobilization

AFMAN 36-2105, Officer Classifications

AFMAN 36-2108, Airman Classifications

Air Combat Command CONOPS for Theater Air Base Communications

***FM 3-34.230, Topographic Operations (Added) (ANG)***

***FM 3-34.331, Topographic Surveying (Added) (ANG)***

***FM 21-10, Field Hygiene And Sanitation (Added) (ANG)***

***UFC 3-260-01, Airfield And Heliport Planning And Design (Added) (ANG)***

*Abbreviations and Acronyms*

**ACC**—Air Combat Command

**ACO**—Airspace Control Order

**ACP**—Airspace Control Plan

**ADVON**—Advance Team

**AETC**—Air Education and Training Command

**AFCC**—Air Force Component Command

**AFFOR**—Air Force Forces

**AFFSA**—Air Force Flight Standards Agency

**AFJQS**—Air Force Job Qualification Standards

**AFOC**—Air Force Operations Center

**AFSOC**—Air Force Special Operations Command

**AMC**—Air Mobility Command

**AME**—Air Mobility Element

**ANG**—Air National Guard

**AO**—Airfield Operations

**AOC**—Air Operations Center

**AOF**—Airfield Operations Flight

**AOF/CC**—Airfield Operations Flight Commander

**AOR**—Area of Responsibility

**ASR**—Airport Surveillance Radar

**ATO**—Air Tasking Order

**ATC**—Air Traffic Control

**ATCALs**—Air Traffic Control and Landing Systems

**ATCS**—Air Traffic Control Squadron

**BOS**—Base Operating Support

**C2**—Command and Control

**C4I**—Command, Control, Communications, Computers and Intelligence

**CATCO**—Chief, Air Traffic Control Operations

**CCG**—Combat Communications Group

**CBCS**—Combat Communications Squadron

**CFETP**—Career Field Education and Training Plan

**CINC**—Commander in Chief

**COMSEC**—Communications Security  
**CONOPS**—Concept of Operations  
**CONUS**—Continental United States  
**DATCALs**—Deployable Air Traffic Control and Landing Systems  
**DMD**—Deployment Manning Document  
**DOC**—Designed Operational Capability  
**EMCON**—Emissions Control.25  
**FAA**—Federal Aviation Administration  
**FIC**—Flight Inspection Center  
**GCA**—Ground Controlled Approach  
**HF**—High Frequency  
**HMMWV**—Highly Mobile Multi-wheeled Vehicle  
**IFR**—Instrument Flight Rules  
**IMC**—Instrument Meteorological Conditions  
**J1/A1**—JT/Air Force Manpower and Personnel  
**J2/A2**—JT/Air Force Intelligence  
**J3/A3**—JT/Air Force Operations  
**J4/A4**—JT/Air Force Logistics  
**J5/A5**—JT/Air Force Plans and Policy  
**J6/A6**—JT/Air Force C4 Systems  
**JAOSC**—Joint Air Operations Staff Course  
**JDACC**—Joint Doctrine Air Campaign Course  
**JOPEs**—Joint Operations Planning and Execution System  
**JTF**—Joint Task Force  
***LOP – Local Operating Procedures (Added) (ANG)***  
**MAJCOM**—Major Command  
**MEFPAK**—Manpower and Equipment Force Packaging System  
**METNAV**—Meteorological Navigation  
**MHz**—Megahertz  
**MLS**—Microwave Landing System  
**MMLS**—Mobile Microwave Landing System  
**MOA**—Memorandum of Agreement  
**MRSP**—Mobility Readiness Spares Package

**NAF**—Numbered Air Force  
**NAS**—National Airspace System  
**NAVAID**—Navigational Aid  
**NM**—Nautical Mile  
**OCONUS**—Outside Continental United States  
**OJT**—On-The-Job Training  
**OOTW**—Operations Other Than War.<sup>26</sup>  
**OPLAN**—Operations Plan  
**OPSTASK**—Operations Tasking  
**OSS**—Operations Support Squadron  
**PACAF**—Pacific Air Forces  
**PAR**—Precision Approach Radar  
**PEM**—Program Element Monitor  
**POM**—Program Objective Memorandum  
**QRP**—Quick Reaction Package  
**RAPCON**—Radar Approach Control  
**RFC**—Radar Final Control  
**SEI**—Special Experience Identifier  
**SOF**—Special Operations Forces  
**SST** – *Site Survey Team (Added) (ANG)*  
**STT**—Special Tactics Team  
**SVT** – *Site Verification Team (Added) (ANG)*  
**TACAN**—Tactical Air Navigation  
**TACOPDAT** —Tactical Operation Data  
**TACS** —Theater Air Control System  
**TALCE** —Tanker Airlift Control Element  
**TERPS** —Terminal Instrument Procedures  
**TPFDD**—Time-Phased Force Deployment Data  
**UHF**—Ultra High Frequency  
**USAFE**—United States Air Forces in Europe  
**USSOCOM**—US Special Operations Command  
**UTC**—Unit Type Code  
**VFR**—Visual Flight Rules

**VHF**—Very High Frequency

**VMC**—Visual Meteorological Conditions

**VORTAC**—Very High Frequency Omnidirectional Range Tactical Air Navigation

**WMP**—War and Mobilization Plan

### *Terms*

**Airfield Operations**—Communications (equipment and maintainers) and operations (air traffic controllers and airfield managers) personnel..27

**Air Traffic Control and Landing Systems**—Department of Defense facilities, personnel, and equipment (fixed, mobile, and seaborne) with associated avionics to provide safe, orderly, and expeditious aerospace vehicle movements worldwide.

**Area of Responsibility**—The geographic area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. (JP 1-02)

**Bare Base**—A base having minimum essential facilities to house, sustain, and support operations to include, if required, a stabilized runway, taxiways, and aircraft parking areas. A bare base must have a source of water that can be made potable. Other requirements to operate under bare base conditions form a necessary part of the force package deployed to the bare base. (JP 1-02)

**Core UTC Package**—Aviation unit and support UTCs capable of supporting the combat aviation unit at a Collocated Operating Base or standby base with little or no additional support required, except to account for destination specific requirements or functional area deficiencies not address within the Core UTC Package. (AFMAN 10-401)

**Designed Operational Capabilities Statement**—A summary of a units mission for which the unit has been equipped, organized, or designed. (AFI 10-201)

**Familiarization Training**—Field training to acquaint personnel with specific system or to keep personnel abreast of changing concepts and requirements. (AFM 11-1)

**Ground Controlled Approach**—The technique for talking down, through the use of both surveillance and Precision Approach Radar, an aircraft during its approach so as to place it in a position for landing. (JP 1-02)

**Manpower and Equipment Force Packaging System (MEFPAK) Responsible Command**—

MAJCOM or Field Operating Agency designated by a HQ USAF functional manager to develop and maintain detailed data for a UTC package for use throughout the Air Force. (AFMAN 10-401)

**Precision Approach Radar**—Radar displaying range, azimuth, and elevation (in relation to a glide slope) normally encompassing an area from 10 to 20 miles on final approach to a position on the runway

intercepted by the glide slope. (AFM 11-1)

**Radar Approach Control (RAPCON)**—A fixed, mobile, or transportable radar facility that provides approach control service using surveillance radar.

**Radar Final Control (RFC) Facility**—A fixed, mobile, or transportable radar facility which provides only Precision Approach Radar (PAR), PAR monitored, or Airport Surveillance Radar (ASR) approaches.

**Time-Phased Force Deployment Data**—The Joint Operations Planning and Execution System data base portion of an operations plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan, including: (a). In-place units. (b). Units to be deployed to support the operation plan with priority indicating the desired sequence for their arrival at the port of debarkation. (c ). Routing of forces to be deployed. (d). Movement data associated with deploying forces. (e). Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces, and (f). Estimate of transportation requirements that must be filled by common-user lift resources as well as those requirements that can be fulfilled by assigned or

attached transportation resources. Also called TPFDD. (JP 1-02)

**Unit Type Code**—A five character, alphanumeric code that uniquely identifies each type unit of the Armed Forces. (JP 1-02)



## Attachment 2

### MOBILITY BAG REQUIREMENTS

A-Bag		B-Bag	
<u>ITEM</u>	<u>QTY</u>	<u>ITEM</u>	<u>QTY</u>
A-3 Kit Bag	1	A-3 Kit Bag	1
Batteries	2	Lined Field Cap	1
Belt, Web	1	Mitten Set	1
Canteen	1	Mukluk Insert	1
Canteen Cap	1	Mukluks	1
Chin Strap	1	N3B Parka	1
Cover, Canteen	1	Socks, Wool	4
Cup, Canteen	1	Sweater, Wool	1
Entrenching Tool	1	Underwear, Bottom	3
W/Case			
Field Pack (w/Straps)	1	Underwear, Top	3
Flashlight	1		
Fork, Mess	1	C-Bag (not usually issued until deployment)	
Glovers, Work and	1		
Inserts			
Harness Suspend	1	Kit bag	1
Helmet, Kevlar	1	Over garment	3
Helmet Cover	1	Filter Canister	4
Insect Repel (Non-aero-sol)	1	Hood	4
Kit, First Aid	1	Gloves, Chemical	4
Knife, Mess	1	GVO Boots	3
Laundry or	1	M8 Paper	1
Waterproof Bag			
Mosquito Net	1	Cotton Inserts	4
Mosquito Rod Set	1	M9 Tape	1
Pan, Mess	1	Decon Kit	3
Parachute Cord	50 Ft	Mask MCU 2/P	1
Pocket Tool, Surv	1	Overboots, CW Black	2
Poncho or Overalls,	1		
Wet Weather			
Poncho, Ammo	1		
Sleeping Bag	1		
(Extreme Cold)			
Sleeping Pad	1		
Spoon, Mess	1		
Sun Block	1		

Items that may be required by message

Flack Vest	1
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Items Combat Communications should provide for ATC augmentation personnel to meet OSHA requirements

Hard Hat, Safety	1
Goggles, Eye Protection	1
Back Support	1
Steel Toe Safety Boots	1 pr

*Attachment 3 (Added) (ANG)**Duty Position Training Tasks Required for UTC Personnel*

*A3.1. (Added) (ANG) Duty Position Training Tasks Required For UTC Personnel. The requirements in this attachment are to be as minimum AFSC training standards for deployment qualifications as well as to ensure that all ANG ATCS uniformly figure their training capability for SORTS reporting. IAW AFI 10-201/ANG Sup 1, Table 6.7, this attachment specifically outlines all requirements to be considered when computing training totals.*

*A3.1.1. TRSA1 - AFSC 13M3A, and 1C1X1:*

A3.

A3.

A3.

*A3.1.1.4. Operate and align (if required) equipment associated with assigned duty position.*

A3.

A3.

*A3.1.2. TRSA2 All 2EXXX and 3EXXX**A3.1.2.1. AFSC 2E0X1:*

*A3.1.2.1.1. Perform setup and teardown procedures on AN/MPN-14K.*

*A3.1.2.1.2. Install and align MTI reflectors.*

*A3.1.2.1.3. Perform system power-up and power-down procedures.*

*A3.1.2.1.4. Perform emergency operation procedures.*

*A3.1.2.1.5. Perform PMIs up to and including 56 day routines.*

*A3.1.2.1.6. Isolate malfunctions in assigned systems, replace defective unit, and perform required alignments.*

*A3.1.2.2. AFSC 2E1X2:*

*A3.1.2.2.1. Inventory and pack TRN-26, generators, and support items.*

*A3.1.2.2.2. Assemble TRN-26 into basic configurations.*

*A3.1.2.2.3. Set equipment to assigned frequency and identification code.*

*A3.1.2.2.4. Perform turn-on and alignment procedures.*

*A3.1.2.2.5. Perform PMIs up to and including 56 day routines.*

*A3.1.2.2.6. Isolate malfunctions to a line replaceable unit and replace defective unit.*

**A3.1.2.3. AFSC 2E1X3:**

*A3.1.2.3.1. (Sub-UTC 6KBK1, MPN-14K) Operate, troubleshoot, and maintain: AN/GRR-23/24 radio receivers, AN/GRT-21/22 radio transmitters, AN/GRC-211 radio transceiver, AN/GRC-171B(V)4 radio transceiver, AN/GSH-56 voice and/or the AN/GSH-72 recorder/reproducer and communications control consoles.*

*A3.1.2.3.2. (Sub-UTC 6KBG1, MSN-7) Operate, troubleshoot, and maintain:*

*A3.1.2.3.3. (Sub-UTC 6KGF1, TRC-176) Operate, troubleshoot, and maintain AN/TRC-176 transceivers.*

*A3.1.2.3.4. Setup and teardown of prime equipment.*

*A3.1.2.3.5. Assist with pre- and post-deployment of UTC.*

*A3.1.2.3.6. Perform Preventative Maintenance Inspections (PMIs) as required.*

*A3.1.2.3.7. Isolate malfunctions to a line replaceable unit and replace defective unit.*

**A3.1.2.4. AFSC 2E6X3:**

*A3.1.2.4.1. Inventory and pack assigned telephone equipment and support items.*

*A3.1.2.4.2. Install/connect 302A system and associated equipment.*

*A3.1.2.4.3. Install and remove 407L cables and junction boxes.*

*A3.1.2.4.4. Install and remove cross connects.*

*A3.1.2.4.5. Install and perform operational checks of phone systems in the MPN-14K*

*A3.1.2.4.6. Perform PMIs up to and including 28 day routines.*

*A3.1.2.4.7. Isolate and repair malfunctions in the 302A and 407L equipment to component level.*

*A3.1.2.4.8. Install and maintain crash alarm system, selective signaling system, and TACAN site alarm system.*

*A3.1.2.4.9. MSN-7 UTC: Configure Communications Control Unit (CCU) cards.*

**A3.1.2.5. AFSC 3A051:**

*A3.1.2.5.1. Update file and publication records.*

*A3.1.2.5.2. Inventory and pack general office supplies.*

*A3.1.2.5.3. Possess skills for effective communication.*

*A3.1.2.5.4. Able to solve minor problems with computer software and hardware.*

*A3.1.2.5.5. Competent in message traffic, to include USMTF.*

**A3.1.2.6. AFSC 3E0X2:**

**A3.1.2.6.1. Inventory and pack assigned generators, and support equipment.**

**A3.1.2.6.2. Position generators and auxiliary fuel sources.**

**A3.1.2.6.3. Install and connect grounds.**

**A3.1.2.6.4. Connect parallel cables, and perform parallel operation.**

**A3.1.2.6.5. Connect generators to supported loads.**

**A3.1.2.6.6. Perform pre-operations checks.**

**A3.1.2.6.7. Perform run-up and shut-down procedures.**

**A3.1.2.6.8. Perform daily inspections.**

**A3.1.2.6.9. Establish refueling schedule.**

**A3.1.2.6.10. Isolate and repair generator and wiring malfunctions.**

**A3.1.2.7. AFSC 3E1X1:**

**A3.1.2.7.1. Prepare ECUs for deployment.**

**A3.1.2.7.2. Inventory and pack ECU maintenance and support kits.**

**A3.1.2.7.3. Position ECUs and install air ducts.**

**A3.1.2.7.4. Connect control and power cables.**

**A3.1.2.7.5. Install and connect grounds.**

**A3.1.2.7.6. Perform pre-operational checks.**

**A3.1.2.7.7. Perform daily inspections.**

**A3.1.2.7.8. Isolate and repair ECU malfunctions.**

**A3.2. (Added) (ANG) Deployment Training Tasks Required for All UTC Personnel. TRSA3 for All UTC Personnel:**

**A3.2.1. Explosive Ordnance Reconnaissance**

**A3.2.2. Law of Armed Conflict**

**A3.2.3. The Code of US Fighting Forces**

**A3.2.4. Personal and Family Readiness**

**A3.2.5. Self-Aid and Buddy Care**

**A3.2.6. Palletization**

**A3.2.7. Government Motor Vehicle and Convoy Training**

**A3.2.8. Camouflage**

**A3.2.9. Tent Erection**

*A3.2.10. Site Defense*

*A3.2.11. Security Awareness, Training and Education (SATE) to include OPSEC, COMSEC, and COMPUSEC*

*A3.2.12. Unit Mission, Joint Task Force Organization, and Battlefield Relationships Training*

*A3.2.13. Chemical/Biological Warfare Defense*

*A3.2.14. Small Arms Qualification*

*A3.2.15. Force Protection*

*A3.2.16. CPR*

*A3.2.17. Task Qualification Training (TQT): Each ATCS will prepare and publish an OI or regulation outlining the specific requirements for TQT for each position of all UTCs the unit is tasked with.*

*A3.2.18. Generator*

*A3.2.19. Fire Extinguisher*

*A3.2.20. Organizational Risk Management*

*A3.2.21. Code and Authentication Systems Training (Air Traffic Ops Personnel Only)*

*A3.2.22. Air Traffic Control Proficiency reporting requirements IAW AFI 10-201/ANG Sup I, paragraph 2.11.10*

*A3.3. Additional Tasks, assigned by each ATCS, as required for Designated UTC Personnel included in Sub area TRSA3.*

*A3.3.1. Certification of Hazardous Cargo*

*A3.3.2. Aircraft Load Planning*

*A3.3.3. Increment Manager/UTC Chief*

*A3.3.4. Classified/Cargo/Weapons Courier*

*A3.3.5. Cargo Preparation and marking*

*A3.3.6. Aircraft Load Team*

*Attachment 4 (Added) (ANG)***DEPLOYMENT SURVEY**

*Site surveys will be conducted whenever the time and conditions permit. They may be conducted as a prelude to an imminent deployment, to a near future deployment, or in conjunction with a major command airfield development plan for possible future contingency use. The prime objective of this survey is to gain first hand information on all aspects unique to an impending deployment. Survey personnel, whether or not they will be a part of the main deployment must be provided with all information, applicable to the proposed deployment and be provided with a checklist covering all questions pertinent to the deployment.*

*The following site survey checklist is a compilation of checklists used by Air Traffic Control Squadrons. It is standardized, to the maximum extent possible, for use by any ATCS unit in any geographic area; however, supplements will be required to cover siting peculiarities of individual facilities to be employed. Certain items will be required to be covered for every deployment, others will be needed for certain types of operations. Each, however, must be thoroughly reviewed by the survey team chief prior to departure from the survey location to ensure that each applicable item has been thoroughly and properly addressed. For simplicity of use, this checklist is divided into two parts: general and air traffic control.*

**PART ONE****SITE SURVEY - GENERAL**

*Date of Survey* \_\_\_\_\_

**1. Deployment Location:**

- a. Coordinates*
- b. US military installation*
- c. Foreign government military installation*
- d. US civilian installation*
- e. Foreign civilian installation*
- f. Isolated or off-base location*
- g. Safety considerations*

**2. Facilities provided by Combat Communications Unit:**

- a. Facility*
- b. Operational Responsibility*
- c. Maintenance Responsibility.*

**3. Associated facilities in place or to be provided by other organizations:**

- a. Facility*
- b. Operational Responsibility*



*c. Maintenance Responsibility.*

*4. Services to be provided by combat communications units if not clarified in paragraph 2, Part One this attachment.*

*5. Associate Services provided by other organizations if not clarified in paragraph 3, Part One this attachment.*

*6. Letters of Agreement/Operations Letters required with associated organizations: (include here or refer to Part Two or Three, this attachment, as applicable).*

*7. Unit exercising operational control or employed element(s):*

*a. Organization*

*b. Contact by name and position*

*c. Telephone number (Commercial and DSN)*

*8. Unit to which employed element(s) attached:*

*a. Organization*

*b. Contact by name and position*

*c. Telephone number (Commercial and DSN)*

*9. Transportation:*

*a. Is heavy-duty equipment available (cranes, fork lift):*

*(1) Capability?*

*(2) Offload of aircraft?*

*(3) Equipment/antenna erection?*

*b. Towing equipment for initial movement of equipment to site(s):*

*(1) What organization will provide?*

*(2) Are vehicles compatible (pintle hitch, air brake, etc.)?*

*(3) For off-base sites, what is accessibility, what type vehicle is needed? (K-loaders, etc.)?*

*c. If a beach landing is required, what is soil composition? What type vehicle will be required? What are the restrictions to movement other than sand?*

*d. Local transportation required:*

*(1) Transportation/vehicles requirement for facility support/personnel support?*

*(2) Quantity and type vehicle available for issue?*

*(3) Is an operator's permit acceptable?*

*(4) Dispatch vehicles available?*

*(5) Shuttle bus service available (obtain schedule)?*

*(6) Commercial bus service if applicable (schedule and fare)?*

*e. What vehicles, by type, should/shall be deployed?*

*(1) Vehicle maintenance support available? (Include contacts, telephone numbers, and procedures if military. If commercial, determine location and contact requirements).*

*(2) Refueling procedures/credit card requirements.*

*f. Maximum runway, taxiway, parking ramp capacity by type aircraft*

**10. Logistics:**

*a. Supply:*

*(1) What are supply channels?*

*(2) What is supply capability?*

*(3) What supply procedures are in force?*

*(4) Local purchase procedures if base supply does not exist?*

*(5) Local economy capability?*

*(6) Name and location of logistic support base if other than employment location.*

*b. POL Delivery and Storage:*

*Delivered by*

*Fuel Trucks*

*(1) MOGAS*

*(2) Diesel Fuel*

*(3) JP4/5*

*(4) Lube Oils*

*(5) Other Sources*

*(6) Compute POL Requirements*

*c. Is PMEL available? Give location and contact.*

*d. Power:*

*(1) Commercial/base power available at any sites?*

*(2) Is it usable for ATCS facilities?*

*(3) Obtain technical data (voltage, phase, frequency, stability, etc).*

*(4) Compute total primary/back-up power unit requirements.*

*e. Storage. Is there an adequate storage compound available for:*

*(1) Tools/supplies?*

*(2) Equipment?*

*(3) Vehicles?*

*(4) Classified materials?*

*f. Building/shelter availability for:*

*(1) Equipment maintenance (DCC)*

*(2) Administrative space*

*(3) Team commander*

***11. Security. Except where otherwise noted, all information required by this checklist should be provided***

*a. Type of security forces available:*

*(1) On-base:*

*(a) Air Force security police*

*(b) US military*

*(c) Host nation civilian/military forces*

*(2) Off-base:*

*(a) Host base security forces response*

*(b) US military forces*

*(c) Host nation civilian/military forces*

*(d) Response times to sites*

*(e) Method of contacting response forces*

*b. Advise BDOC of location of critical communication resources (on- and off-base); request designation of resources as controlled areas or restricted areas (if applicable)*

*c. Request inclusion into host base Security Reporting and Alerting System; obtain telephone numbers/radio frequencies for emergency reporting.*

*d. Obtain current threat assessment from host 051 unit.*

*e. Location of base destruction facility for classified materials.*

*f. Owner-user Security Requirements:*

*(1) On-base:*

*(a) Storage location for weapons/munitions.*

*(b) Close-in security requirements, locations of adjacent base defense positions.*

*(c) Emergency withdrawal procedures.*

*(d) Theater specific Rules of Engagement/challenging procedures.*

*(e) Host base camouflage scheme.*

*(f) Curfew restrictions; off limits areas.*

**(2) Off-base:**

- (a) Convoy requirements/routes.*
- (b) Friendly forces in area, method of contact.*
- (c) Secure rally points following emergency withdrawal from the site.*
- (d) Location of off-base sites.*
- (e) Evacuation authority/procedures.*

**12. Communications/Administration:**

- a. What type communications are available? Local, long haul?*
- b. Can local telephone service be obtained in:*
  - (1) Administrative/command areas?*
  - (2) Maintenance areas?*
  - (3) Individual sites, particularly off-base?*
  - (4) Quarters?*
- c. Administrative support (clerk-typist) available?*
- d. What are local message/official mail distribution procedures?*
- e. Message and official mail address?*
- f. Obtain copy of base telephone directory.*

**13. Personnel:**

- a. Quarters available. Officers/Airmen:*
  - (1) VOQ/TAQ, location and telephone number-make reservations*
  - (2) Foreign government quarters adequate? Cost?*
  - (3) Civilian quarters - cost, location, distance from work areas?*
  - (4) Field conditions - locate and stake out cantonment area*
- b. Rations/messing:*
  - (1) Government mess - obtain hours*
  - (2) Contract mess - obtain hours and cost*
  - (3) Field kitchen - obtain hours and cost*
  - (4) Civilian, commercial only - determine acceptability (sanitation) and cost*
  - (5) Location of above - will meals be missed by any personnel? Estimate how many*
  - (6) No facilities - estimate rations required and resupply source/procedures*
  - (7) En route rations/messing requirements/availability*
- c. Medical:*

- (1) Dispensary/hospital capability*
- (2) Immunizations required*
- (3) Dental capability*
- (4) Special eyeglass requirements/capabilities*
- (5) If civilian only, obtain location and capability*
- (6) Potable water/sanitation facilities. Special requirements*
- (7) Mortuary Affairs*

*d. Mail:*

- (1) Complete address (APO, unit, etc.)*
- (2) Pickup and delivery procedures.*
- (3) Make necessary arrangements with local postal unit/authority.*

*e. Finance:*

- (1) Government finance office available?*
- (2) What services for TDY personnel?*
- (3) Where can personal checks be cashed?*
- (4) Where can government checks be cashed?*
- (5) What is local/official rate of exchange? Restrictions on exchange or amount authorized to enter country, other.*
- (6) Financial requirements for each team member, officer and airman based on "standard of living" for the area?*

*f.. Uniform Requirements:*

- (1) Duty*
- (2) Off-duty/off-base*
- (3) Civilian clothes required*
- (4) Civilian clothes authorized*

*g. Climatic conditions for deployment period*

*h. Field equipment requirements:*

- (1) Snake bit kits*
- (2) Mosquito netting*
- (3) Insect Repellents*
- (4) Other special items or clothing*

*i. Weapons/ammunition requirements/restrictions*

*j. List special equipment/tools required.*

*k. Security clearance requirements*

*l. Passport and visa requirements*

*m. Race or religion restrictions*

*n. Language problem which may adversely affect mission*

**14. Base/Recreational Facilities:**

*a. Base Exchange:*

*(1) Limitations to certain items*

*(2) Alternate means of obtaining sundry items*

*b. Laundry/dry cleaning facilities*

*c. Officers open mess*

*d. NCO open mess*

*e. Airman club*

*f. Service club*

*g. Theater*

*h. Athletic facilities*

*i. Contact local personal affairs officer, Embassy, or Consulate for:*

*(1) Maps of local area*

*(2) Hotels/restaurants (costs)*

*(3) Sights/tours available/transportation (costs)*

*(4) Curfew and off-limits restrictions*

*(5) Local customs/laws, taboos, etc*

**15.** *Note safety considerations of site (electrical, tripping, etc.).*

**16.** *List all persons contacted by name, grade, position, and indicate responsibility of each toward deployment*

**17.** *Have you obtained all base layout maps, area charts, drawing, photos, required by deployment teams?*

**18.** *Have you maintained a diary of events to be used for completing your trip report on return?*

**PART TWO****SITE SURVEY- ATC**

*Date* \_\_\_\_\_ *of*  
*Survey* \_\_\_\_\_

**1. Deployment Information:**

*a. Location*

*b. Coordinates*

*c. Contacts (Chief, ATC Operations, base operations officer)*

*(1) Name*

*(2) Organization*

*(3) Telephone number (Commercial and DSN)*

*d. Operational dates: From* \_\_\_\_\_ *To* \_\_\_\_\_

*e. Safety considerations*

**2. DATCALS Facilities:**

*a. Facilities currently operational:*

*(1) List by type, frequencies, ID*

*(2) Restrictions to use (if foreign owned, operated or maintained, determine, if possible, technical qualities, limitation, date of last flight check)*

*(3) Hours of operation if other than 24 hours a day*

*(4) If foreign operated, what language requirements, problems, etc.*

*b. Mobile facilities required:*

*(1) List by type.*

*(2) Frequencies/call signs*

*(3) Hours of operation*

*(4) Service to be provided (if unique to the operation)*

*(5) Primary type A/C to be served*

*(6) Anticipated traffic densities*

*c. Runway data (for each usable runway):*

*(1) Length*

*(2) Width*

- (3) Elevation*
- (4) Number*
- (5) MAG bearing*
- (6) Barriers*
- (7) Taxiways*
- (8) Primary/secondary runways and prevailing winds*
- (9) Construction areas*

*d. Landline requirements/availability:*

*(1) GCA/RAPCON to:*

- (a) Tower*
- (b) GCI*
- (c) Center*
- (d) BASOPS*
- (e) ALCE*
- (f) Other control agencies*
- (g) Weather*
- (h) NAVAID monitors*
- (i) Other as required*

*(2) Control Tower to:*

- (a) GCA/RAPCON*
- (b) GCI*
- (c) Center*
- (d) BASOPS*
- (e) ALCE*
- (f) Weather*
- (g) Other control agencies*
- (h) Fire/crash*
- (i) NAVAID monitor*
- (j) Others as required*

*3. Air Traffic control:*

*a. Determine control*

- (1) Country*
- (2) Area/FIR*



- (3) Center*
- (4) Control area*
- (5) Class airspace*
- (6) Approach*
- (7) Departure*

*b. Obtain or develop as necessary:*

- (1) Local traffic patterns*
- (2) Approach procedures*
- (3) Departure procedures*
- (4) NAVAID letdown procedures*
- (5) Emergency procedures*
- (6) Letters of agreement*
- (7) Operations letters*
- (8) Facility rating/training guides*
- (9) Local grid/area/restricted area maps/charts*
- (10) Ground control procedures*
- (11) Operating Instructions (OI)*

*c. Coordinate procedures/agreements developed with appropriate user agency.*

*d. Responsibilities and procedures for:*

- (1) NAVAIDS monitoring*
- (2) Emergency frequency monitoring:*

*(a) 121*  
*(b) 243*

- (3) NOTAM issuing and transmission*
- (4) Obtaining flight information publications*
- (5) Frequency assignment/coordination*

**4. Facility Sites (general):**

*a. Accessibility:*

- (1) Road conditions/limitations*
- (2) Anticipated adverse effects of weather*

*b. Site Preparation Required:*

- (1) Leveling*
- (2) Clearing*

*(3) Drainage*

*(4) Revetments*

*(5) Availability of materials, labor, equipment, civil engineers?*

*c. Suitable commercial/base power available?*

*d. Proximity to high voltage lines, fuel and ammo storage areas? (Note safety and interference considerations)*

*e. Terrain/soil peculiarities*

*f. Obstruction/limiting factors*

*g. Possible frequency interference from other facilities in vicinity*

*h. Airfield waivers required?*

*(1) Who shall initiate request?*

*(2) Who is the approval authority?*

*i. Obtain or prepare airfield/site layout maps/photos and depict facility location(s).*

*j. Refer to individual facility site survey checklists for more detailed data as applicable.*

*5. Effective emergency procedures (bailout, transfer of control, procedures during attack, etc.)*

*6. Collect enough airfield/air traffic LAK data and digital photos to use in the development of computer generated radar and tower simulator programs for the deployment location.*